

**Retyped from a scruffy well-thumbed piece of paper, part of an introduction to the subject.**

Old notes [1970/71] [second draft] from HMS Excellent's " Fleet Management and Man Power Allocation Section" on 'Communication Branch Management' in sea-going vessels.

All branches and departments of the navy had to have their respective management criteria put on an official basis administered by CinC Fleet and CinC NavHome

Since BR222 and BR333 were recognised Communication Branch Books of Reference, it was considered feasible that a new section on Management would be incorporated into BR222, but that was later considered to be the wrong vehicle in which to publish this document as only 'sparkers' consulted the "twicer" as their "Technical Bible"

Subsequently, it was proposed that a Management Training sub-department be added to HMS Mercury' Dreadnought Block Modules in which all W/T, V/S and EW Ratings would undergo Management Training as part of their respective advancement training courses with a suitable examination [written or oral], the success in which would be a mandatory pre-requisite to passing their professional career courses. It would be taught at the leading rate level on PO[Q] courses , on Instructor Courses and PJT's. Management courses for shore commcen's would continue to be delivered as OJT. A comprehensive overview of Communication Management would be a non-examinable subject in all leading hand career courses

The use of a Book of Reference [BR] is being considered as a "Guide to Communications Management in sea-going vessels" . Additionally, task-books will be amended at the next major reprint to include the basic concepts of departmental organisation and management.

Taken from the records of Godfrey [Jeff] Dykes @ [www.godfreydykes.info](http://www.godfreydykes.info)

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PART ONE

COMMUNICATION MANAGEMENT IN SHIPS

INTRODUCTION

1. The guidance in Part 1 does not attempt to replace instructions in books and orders of a mandatory nature issued by authority. It is essential that senior ratings make themselves conversant with all such publications, including Defence Council Instructions, in order to carry out their tasks effectively.
2. The information given in this part of the book envisages ratings in "charge" positions joining a ship building or in refit, undergoing a "shakedown" period and preparing for a work-up. Consequently the guidance is laid out in the sequence in which the various problems would probably arise.
3. Senior communications ratings are particularly advised that while the chapters which follow highlight the early part of a commission the information in them holds good throughout a ships active life. They must not dispence with this guidance on completion of work-up.

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CHAPTER 1

ACTIVITIES PRIOR TO THE OPERATIONAL DATE

101. Sequence of events.

a. The sequence of events which concern communications ratings is shown at Annex 1A. This is primarily for new construction ships but long refit sequence is similar. The main reference for this subject is BR 2101. "Management Instructions, Ships and craft under construction, repair or refit at Dockyards".

b. The various points in this sequence of events are known as "Milestones".

c. The purpose of the SCO and the ratings-in-charge of each sub-division visiting the URTS, HMS Mercury is to:

- (1) Receive a briefing on the latest modification state of their equipment.
- (2) Team up the proposals for changes to their equipment and lay-out (eg: outstanding A and A's)
- (3) Be briefed on the traffic flow philosophy used in the design of their ship.

102. Complement joining dates.

a. The C.N.D. will normally draft communications ratings to join new construction or long refit ships as follows:

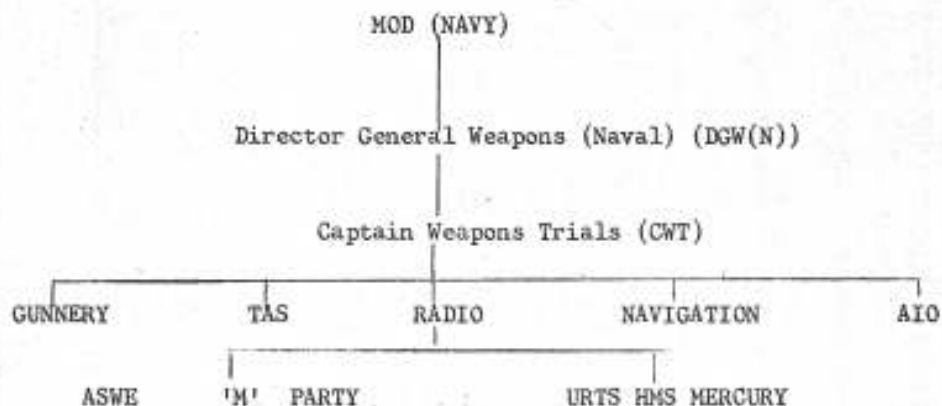
- (1) CRS/RS            6 months prior to commissioning plus 2 LRO(G)/RO(G) and 1 LRO(T)/RO(T).
- (2) CCY/CY            3 months prior to commissioning plus 2 LRO(T)/RO(T) and 1 RO(T).
- (3) CRS/RS(W)        3 months prior to commissioning plus 1 LRO(W)/RO(W).
- (4) Remainder from 3 months prior to commissioning date.

103. Inspections and Trials - General.

a. Communication trials involve all surveillance radars, radio, electronic warfare and visual signalling equipment. The conducting authority is Captain Weapons Trials and the main reference is BR 4050 (2).

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- b. The Inspection and Trial Programming Organisation is:



- c. Normal Inspection and Trials programme sequence is as follows:

<u>TRIAL/INSPECTION</u>	<u>WHEN CONDUCTED</u>
(1) Advance Installation Inspection	Before Installation
(2) Progress Inspection	During Installation
(3) Installation Inspection	o/c Installation
(4) Installation Trial	o/c Installation Inspection
(5) Final Installation Inspection	o/c Final Installation Trial
(6) Harbour Acceptance Trials	o/c Final Installation Trial
(7) Sea Acceptance Trials	o/c HATS
(8) Miscellaneous trials	See para 107

d. Trials (1) to (4) will normally have been completed prior to the senior communications ratings joining. Details of these trials can be obtained from URTS, HMS MERCURY.

e. The senior rating(s) of the sub-specialisation(s) concerned should be in attendance for trials (5) to (8). Ratings detailed to participate in trials must be well briefed.

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104. Final Installation Inspection.

- a. This Inspection includes setting to work, tuning and testing.
- b. Communication ratings as operators are not normally required but the appropriate senior ratings should attend as observers - primarily to take note of any equipment idiosyncrasies.

105. Harbour Acceptance Trials (HATS).

- a. The orders for the conduct of HATS are contained in:
  - (1) Radio communications and associated equipment and VS equipment - BR 4050 (2) Appendix 1 Schedule sheets 1 - 13 (Instructions for conduct of Naval Weapons Inspections and Trials. Vol 2; Acceptance Trials)
  - (2) E.W. Equipment - CB 5027
- b. (T), (G) and (W) ratings are required for these trials.

106. Sea Acceptance Trials (SATS).

- a. The orders for the conduct of SATS are contained in:
  - (1) Radio Communications and associated equipment - BR 4050 (2) Appendix 2; Radar and Radio sections
  - (2) EW Equipment - CB 5007.
- b. The tactical sub-specialisation is not concerned.
- c. (G) and (W) ratings are required for these trials.

107. Miscellaneous Trials

- a. External Communications Trials.- The conduct of ECTs is contained in BR 4050 (2) Appendix 1 Sheet R para 4. ECTs are carried out on equipment not covered by SATS. Trials are carried out by the ships at the first opportunity after successful completion of HATS.
- b. RADHAZ Trials.
  - (1) The orders for the conduct of RADHAZ Trials are contained in BR 4050 (2), Chapter 2 and CB 4986 (Addendum). RADHAZ Trials are conducted by ASWE on new weapons systems and equipment only.

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(2) The Communication division will be required to provide operators When the results of the trial are known liaison with the WEO is required to update RADHAZ orders and the RADHAZ stateboard.

(3) References:- BR 2924, CB 4980 (Addendum), Specification DG ships 282 and Ships Rig Drawings.

c. Jammer Effectiveness Trials - Sec CB 5007

d. Mutual Radio Interference Trials (MRIT)

(1) The orders for the conduct of MRIT are contained in:

- (a) BR 4050 (2) App 2 Sheet R150 - Radio MRIT
- (b) FOTI 0303 - Jammer Mutual Interference Trial
- (c) Current DCIs - Must also be consulted

(2) MRITs require thorough planning and liason. The Senior (G) rating should contact URTS HMS MERCURY at least two weeks before the trial to discuss the MRIT Complan. As MRIT involves the use of all communication and radar equipments from all the remote user positions the operators required will be Communicators RPs UCs, etc. In view of the numbers involved and the complexity of this trial it is recommended that a full scale rehearsal be carried out. Daily Orders and planning sheets should detail the trial and also order that use of outgoing communication facilities should be kept to a minimum.

(e) Radiation Test (TEMPEST).- The orders for the conduct of Radiation Tests are given in CB 04912, CB 04931 and DCI Appendix. On satisfactory completion of a radiation test a "Tempest Cleared" signal is originated in accordance with the current DCI. Should any part of the system fail it is not to be used without permission of CINCFLEET. Ashore test will be carried out at four monthly intervals by ships WE Dept.

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108. Calibrations

a. The equipment requiring calibration and the orders for their conduct is listed below.

<u>EQUIPMENT</u>	<u>EQUIPMENT HANDBOOK</u>	<u>CONDUCT REFERENCE</u>
FH4	BR 1442, 1513 BR 1569, 1935B	BR 2357, BR 4050 APP2 Sheet R40
FH5	BR 2465 (1) & (2)	BR 2357
FM12	BR 1370 and Addm	BR 2357, BR4050 App 2 Sheet R42
FM16	BR 2494	BR 2357, BR 4050 App 2 Sheet R42
FU1	BR 2303 Series	BR 4050 App 2 Sheet R43
UA3	BR 2349	BR 4050 App 2 Sheet R4666
UA13	CB 5001	CB 5027
UA8/9	CB 4885 (2)	BR 2357, CB 5007, CB 5027, BR 4050 App, 2 Sheet R48
UA10	CB 5002	BR 2357, CB 5027, CB 5007
667/668	CB 4881 (2)	CB 5007, CB 5027, BR 4050 App 2 Sheet R56
669	CB05016 (2)	CB 5007, CB 5027

b. Details of external support and communications required at the primary calibration ranges are contained in Fleet Operation Orders Vol 1. The Senior Communication Rating involved in calibrations must be aware of the requirement for each trial. Calibration must be planned well in advance and require liason with the WEO, Navigating Officer and Operations officer during all stages.

c. Briefing of operators is essential at least 24 hours prior to the Calibration

109. Specification Drawings.-

a. Those of concern to the Senior Communication Ratings are listed below. These drawings can be obtained from shipbuilders, Royal Dockyards, ASWE and MOD (N) Overseers.



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- |                     |   |
|---------------------|---|
| (1) B608/R1         | Installation specification for fitting W/T Transmitter and Receiver aerials.                              |
| (2) B919            | ICS fits in HM Ships.   |
| (3) B1070 and B1071 | ICS 2 fits in HM Ships.   |
| (4) B947            | Installation specification outfit RWA.  |
| (5) B957/R1         | Installation specifications for arrangement of communications and Electronic Warfare offices in HM Ships. |
| (6) B718/R2         | Installation specification for general arrangements for visual signalling equipment in HM Ships.          |

b. The senior communication rating concerned should check with the WEO that, if appropriate, the above are held onboard. If possible the senior (G) rating should arrange to hold B608/R1.

110. Stores

a. The following publications will assist the Senior Communication Ratings to check that their Naval Stores allowance is correct:-

- |             |   |
|-------------|---|
| (1) BR4     | - Naval Storekeeping Manual                             |
| (2) BR96    | - Stores Accounting Instructions                        |
| (3) BR320   | - General Instructions, Naval Stores                    |
| (4) BR756   | - Navy Depot, Instructions for Stationary Supplies etc. |
| (5) RNCP 13 | - Quartz Crystals for Communications & Allied Services. |

b. Allowance Lists.- Individual ships allowances are listed in the reference below. Initial stores allowances are issued direct to the sub-division and a permanent loan list (S1099) raised. The Senior Communication Ratings are to check against allowance lists that their complement of stores are correct. Stationary allowances consists of 6 monthly supply and on receipt a further 6 months supply should be demanded.

- |          |                         |
|----------|-------------------------|
| (1) S132 | - General Naval Stores. |
|----------|-------------------------|



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- (2) S1310B - Stationary
- (3) D1206 - Technical Stores
- (4) BR756 - Office Machinery

c. Ensure good liaison with the Supply Department for the stowage of bulky items - eg: Flags Ensigns, Teleprinter Rolls) and also to ensure that an adequate stock of heavy use stores (eg: Teleprinter rolls and aerial wire) is maintained.

d. Stores Record.- A record of all demands raised should be kept.  
Recommended headings:-

<u>Patt. No.</u>	<u>Description</u>	<u>Quantity.</u>	<u>Date of Demand.</u>	<u>Demand Note No.</u>	<u>Signature.</u>
------------------	--------------------	------------------	------------------------	------------------------	-------------------

Maintaining such a record will ensure regular turnover of requirements and easy tracer action.

e. Ready use stores should be kept adjacent to equipment where possible.

f. List of Forms for use by the Communications Division.- A list of forms supplied to the Communications Division is at Annexe 1B.

g. DO NOT BECOME A SUB-NAVAL STORES. If other departments and divisions make out good cases for permanently holding equipment which by convention is normally held by the communications divisions arrangements should be made for them to draw them from the supply Department. Such items are, for example, boats ensigns, portables and visual signalling equipment held by the Boats Officer for the sea-boat.

#### 111. Crystals

a. Check crystal allowance against RNCP 13 and make demands accordingly. Crystals for PTR 170 (ARI 18197) are particularly important and crystals for EW equipment are sometimes overlooked.

b. Ship-Shore and emergency frequency crystals should be in - situ in the appropriate equipment. A custom-built cupboard or sets of drawers is recommended for the remainder. The senior (G) rating should keep a separate account of his crystal bank taking instant action to replace faulty crystals.

#### 112. Portables

a. Portable radio equipment allowance is to be checked against the current DCI. This Instruction also gives useful data on all portables in use in the RN as does JSP2

b. Individual portables must be checked against "E" lists before being accepted for operational use.

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c. Check that type 634 (A43) have marked on them the frequencies of the six channels and remember that by connecting one to a fitted UHF aerial they can be used during power failures. The type 635 can also be used in this respect.

d. The senior (G) and (T) rating must maintain good liason with the WEO for the changing of batteries and their ready0use stowage when not in use.

113. VS Equipment

a. Details of allowance for ready reference by the senior (T) rating are contained in an Annex to Part 2 of this book.

114. Training - General

a. This and subsequent paragraphs deals with the setting up of a communication and EW training organisation and envisages activities, within the ship, being confined within the Communication Division. The broader aspects of training and participation in exercises are dealt with in Chapter 2. It is appreciated, however, that the two will probably overlap and they should therefore be read in conjunction.

b. Training is of vital importance throughout a mans career. The senior communication ratings should start a training programme, however simple and however few there are to undertake it, at the first opportunity. To rationalise effort and to follow a consistent policy it is recommended that one senior rating co-ordinate all communication and EW training within the division.

c. The initial aims should be:

- (1) Completion of PCT/PJT by appropriate ratings prior to commencement of the Work-Up.
- (2) Attainment of the appropriate Operational Performance Standards by completion of the Work-Up.

d. Training for advancement must not be ignored particularly for the RO3 due by time for advancement to RO2. However at this stage of the commission the importance of this, generally, is out-weighed by the need to plan for b (2) above. Opportunity should be taken at using the facilities of HMS Mercury and Signal Training Centres for those ratings due for examinations and advancement.

e. A record of training progress must be maintained for individual ratings in order to identify steps in progression towards meeting Operational Performance Standards. A suggested format is at Annex 10. Junior ratings must be kept informed of their progress in this report

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f. It is planned that at some future date training task books will be available to facilitate recording of training progress.

115. Attainment of Operational Performance Standards (OPS)

a. Details of the OPS for all communication ratings are given in RNCP 15. Also contained in this book are the Training Performance Standards (TPS) of ratings who have completed their training at HMS Mercury.

b. The task of those primarily concerned with training is to draw up a programme whose aim is for all ratings to achieve their OPS, which is a measureable performance, in an operational environment - ie - On - the - Job. For those from HMS Mercury it consists of bridging the gap between TPS and OPS by On - the - Job - Training (OJT); for others by PCT/PJT followed by OJT to bring them back to their OPS.

c. Advice on how to conduct OJT is given in RNCP 15.

d. Senior ratings may find that JROs and RO3s join several months before the end of a refit. In these circumstances, where OJT facilities are very limited, consideration should be given to loan drafting them to operational ships.

116. Pre-Commissioning and Pre-joining Training.

a. PCT/PJT courses fall into two categories; those detailed by the CND and those available on request. The senior communication ratings should take advantage of available courses; both for junior and senior rates.

b. Recommended courses are listed below. Details are given in the appropriate DCIs which must be studied before applications are made.

<u>Course</u>	<u>Venue</u>	<u>Notes</u>
(1) Professional	As in DCI	(a)
(2) Security	ATURN POOLE	
(3) Management	RNB Portsmouth	
(4) Divisional	RNB, Portsmouth	
(5) Fire fighting and NBCD	HMS Phoenix	
(6) Ship husbandry	HMS Sultan	

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Notes:

- a. CND does not detail ratings for Naval Gunfire Support courses. Application for at least 2 RO(G) to attend this course should be made direct to ATURM POOLE in accordance with the DCI.

117. Publications and forms associated with communication training management

- a. All senior rates and others concerned with training must be aware of the uses of the following:

<u>Publication/Form</u>	<u>Contains details of</u>
(1) RNCP 15	(a) Courses available at HMS Mercury and STC (b) OJT including Programmed Tests available. (c) Practical exercises to be carried out.
(2) Current DCI	(a) Details of PCT/PJT (b) Dates of communication refresher courses.
(3) BR 1066	(a) Requirements for advancement.
(4) 'S' 1308 series	(a) When completed training carried out (See Annex 1B)
(5) RNCP 10	(a) EW in tactical exercises.
(6) CB 05011 (B)	(a) Radar recognition exercises

- b. A suggested Practical Exercise Planning Sheet and Exercise and Training Planning Sheet are at Annex 1D and 1E.

118. Publication and their stowage

- a. Maintain a good liason with the CBO from the start giving good notice of the books you require and by when you require them.

- b. Standard reference which you should refer to are:

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<u>Publication</u>	<u>Contains</u>
(1) BRN 01/1	Outfit of communication, EW and cryptographic publication to be held.
(2) CBI	Outfit of CBs to be held.
(3) BR1	List of BRs
(4) ACP 122	Basic security instructions
(5) AMSP 293	Stowage Instructions
(6) BR 4005	General security instructions
(7) Captains Standing Orders	Ships Security Orders

c. FLCOs and similar "command" publication, which the CBO may omit to refer to, also lists books you are to hold over and above your normal outfit

d. Take the planned siting of notice and stateboards into account when proposing the siting of safes and steel cupboards. See paragraph 125 b.

e. GET YOUR STAFF SECURITY CONSCIOUS FROM THE OUTSET. IT COULD WELL SAVE SERIOUS EMBARRASSMENT IN THE FUTURE.

119. Emergency Destruction

a. The Emergency Destruction orders for the ship are normally written by the Security Officer. However, he will probably consult the senior communication ratings on certain aspects, particularly concerning interpretation of AMSP 293 and sequence of destruction of cryptographic material.

b. Suggested orders for emergency destruction are shown at Annex 1N. It is recommended that these orders, when suitably changed to suit individual ships organisations, be pasted on the inside lid of the safes concerned and written in the MCO Turn Over Book.

120. Organisation of the Communication Division

a. The fundamental regulations for administering the Communication Division are QRRN. The ship Management System is an elaboration of these regulations consisting of a package of ideas and techniques aimed to improve the utilisation of manpower. The system is designed to assist Officers and Senior Rates to run their ships with simplicity, efficiency and economy by the elimination



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of the waste of men's time and effort caused by indifferent organisation, planning and communication.

b. Full details for the management of a ship are contained in "Practical Management in ships (1973)" issued by Commander-in-Chief Fleet. Two of the more important facets for the Senior Communication Ratings are getting the priorities right and the delegation of tasks.

c. Of prime importance and to be effected at the earliest possible stage in the commission is a good liason between the ratings in charge of each sub-division

121. Division and Station Watchbill

a. Detailed instructions on the compiling of the Divisional/Sub-Divisional and stations watch-bill are contained in Annex 1F. A suggested watch-bill planning sheet is also shown at Annex 1F.

b. The following should be borne in mind when compiling a form S 1309b

(1) Shelter Stations

(a) Watches to be rotated to take into account maximum time permitted outside the citadel during fall-out.

(2) Action Stations

(a) Operators on watch should remain at their positions opposite watches closing up in other positions as ordered.

(3) Life-Raft Stations

(a) Responsibility for provision of portables.

122. Ships Orders

a. The recommended format for compiling Ships Orders is contained in Practical Management in Ships (1973). Suggested headings for the communication division section are shown in Annex 1G.

124. The Commanding Officer Fund

a. In accordance with QRRN and 1950 the Commanding Officer has a small fund available to use for items which will improve the lighting efficiency of the

ship.

- as: b. The senior ratings should bear this in mind for, example, such times
- (1) A crystal box/cupboard
  - (2) Stateboards (see paragraph 125)
  - (3) Watertight portables stowage for liferaft portable.

#### 125. Notice-boards and Stateboards

a. Details of standard fixed notice-boards and state-boards are contained in ASWE specification B957/R1:

- (1) Noticeboards - Chap 4 Art 21
- (2) EW Stateboards - Chap 4 Art 22
- (3) Radio communication - Chap 4 Art 23  
Stateboards
- (4) Siting - Chap 4 Art 25 (includes details of the  
Fleet Formation Board)

Note: Chapter 4 of the ASWE specification also gives details of the EW Stateboard. However, this is obsolescent and details should be obtained from RNCP 10 (see c below).

- b. (4) above should take the siting of safes into account.

c. The following are required but details are not yet listed in the ASWE specification referred to above:

<u>Stateboard</u>	<u>Details</u>
(1) EW Tasking	RNCP 10
(2) EMCON	ACP 178 NATO SUPP 1

d. Portable state-boards listed below are suggested for use, either within the Division or when the (T) sub-divisions are tasked with keeping tactical and similar information up to date during an operation. In most cases these are recommended formats only. The forms should be placed between two sheets of perspex unless a more suitable means of display is appropriate;



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<u>Stateboard</u>	<u>Details</u>
(1) Manoeuvring Form	Form S 376
(2) RAS Gold	Annex 1H
(3) Skeleton Screen	Annex 1I
(4) Submarine Exercise State	Annex 1J
(5) OPGEN Alfa	Annex 1K
(6) SAR Communications	Annex 1L
(7) Submiss - Subsunk - Smashex Communications	Annex 1M

e. Equipment stateboards should indicate equipment under maintenance or defective.

126. Safety

a. Immediate action and an automatic regard for safety precaution are very important when dealing with communications equipment. Too often, however precautions recommended to prevent accident or damage are overlooked when using equipment.

b. It must be emphasised to all ratings, but particularly those living in a ship for the first time, the danger inherent in:

- (1) Working with high voltage power supplies
- (2) The effects of radiation in the vicinity of aerials and aerial leads - to personnel, fuel and explosives.
- (3) The risk of fire.
- (4) Working aloft

c. The publication reference for safety are:

- (1) BR 4007 - Ship Firefighting Manual.
- (2) BR 25 - - First Aid Handbook.
- (3) BR 2924 - Radio Hazards in Naval Service.

d. A "safety" check off list is contained in paragraph 129.

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*SOOT TRAINING*  
129. Operational Date Check-Off List.

a. The following should have been dealt with or in hand before the ship becomes operational, preferably, if possible, before commissioning. They are not, necessarily, in sequence;

(1) Equipment and Trials.

- ~~(a)~~ Equipment brief at URTS, HMS Mercury.
- ~~(b)~~ External communications trials (ECTs).
- ✓ (c) Harbour acceptance trials (HATs).
- ✓ (d) Sea acceptance trials (SATs)
- ✓ (e) Aerials correctly rigged.
- (f) Dressing Lines correctly rigged.
- ✓ (g) Calibrations completed and calibration curves held
- ✓ (h) MRIT completed.
- ✓ (i) RADHAZ trials.
- ✓ (j) Radiation trials.
- ~~(k)~~ Jammer effectiveness trials.
- (l) All remote positions checked.
- ✓ (m) Emergency power supplies tested using relevant equipment.
- ✓ (n) Polar diagrams held.
- (o) COMAL carried out.
- (p) Portables complete and tested.
- (q) Transmitter settings log started.
- (r) Canvas covers for signalling projectors held.
- (s) Canvas bags for dressing lines.
- (t) Dress ship organisation tested.
- (u) Check <sup>COM/P</sup>UA3 in good working order-with particular attention to pulse blanking.
- (v) Ready lights tested.
- (w) Recognition box; switch and dimmer.

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- (x) Emergency NUC lights.
- (y) Damage control lights.
- (z) Headsticks is all Jacks and Ensigns.
- ✓ (aa) Defect books raised and effective defect reporting organisation arranged.
- (ab) Battery stowage and re-charging.
- ✓ (ac) Correct complement of stateboards.
- (ad) Bridge and Screen cards.
- ✓ (ae) Correct siting of stateboards and notice-boards.

(2) Stores.

- ✓ (a) Correct naval stores allowance.
  - ✓ (b) Correct outfit of <sup>SA</sup> BRs and other books issued by the Supply Department.
  - ✓ (c) Correct stationary allowance
  - ✓ (d) Correct office machinery allowance.
  - (e) Correct crystal allowance.
  - (f) Correct allowance of Foreign Ensigns.
  - ✓ (g) Suitable Ready-Use stowages.
  - ✓ (h) Adequate proportions of Ready-Use stores.
  - ✓ (i) Stores demand record.
  - ✓ (j) Adequate supply of naval store forms.
  - ✓ (k) Delegations of responsibility for care and custody of all or certain naval items
- (1) "E" lists for portables held or readily available.

(3) Training.

- ✓ (a) Senior <sup>SW</sup> communication ratings completed PJTs *EQUIP TRAINING*
- ✓ (b) Junior <sup>SW</sup> communication ratings completed PJTs. " "
- ✗ (c) At least two RO(G) completed NGS PJT.

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- ✓ (d) Ship familiarity training for ratings at sea for the first time.
- ✓ (e) Training and exercise programme drawn up.
- ✗ (f) OJT to meet OPS and for advancement.
- ✓ (g) Training Records.
- ✓ (h) Training tapes (EW).
- ✓ (i) Change round duties of junior communication ratings to give breadth of training.
- ✓ (j) Keeping an operators log.
- ✗ (k) Senior EW rating check.

(4) Security and Publications.

- ✓ (a) Read the security section of the Captains Standing Orders.
- ✓ (b) Correct outfit of all publications other than those obtained from naval stores.
- ✓ (c) Publications in good condition.
- ✓ (d) Changes and amendments in date.
- ✓ (e) Correct stowage for publications.
- ✓ (f) Weighted muster boards.
- ✓ (g) Covers for classified machines.
- ✓ (h) Publications stowages correctly marked.
- ✓ (i) Corrections register started.
- ✓ (j) Local corrections entered.
- ✓ (k) Visitors book available.
- ✓ (l) Warning notices on compartment doors.
- ✓ (m) Security of compartments.
- ✓ (n) Adequate confidential waste containers.
- ✓ (o) Routine classified waste destruction.
- ✓ (p) Emergency destruction.
- ✓ (q) Extra copies of books for special purposes.

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- ~~(r)~~ Special NATO and other treaty organisation publications.
- ~~(s)~~ Senior EW rating check RNCP 10 Chapter 9.

(5) Message Processing.

- (a) Design intended message flow path.
- (b) "S" forms.
- (c) Hand message organisation.
- (d) Specimen signatures of Releasing Officer.
- (e) RNCP 9 read by all officers.
- (f) Correct files and file stowage.
- (g) General message register.
- (h) Standard message distributions.
- (i) Rush and special distribution methods for particular types of signals.
- (j) Confidential and above distribution register.

(6) Administration.

- ✓ (a) Watchbill.
- ✓ (b) Junior rates accommodation.
- ✓ (c) <sup>EW</sup> Communication aspects of Captains Standing Orders.
- ✓ (d) <sup>EW</sup> Communication section of Ships Standing Orders.
- ✓ (e) War Orders.
- ✓ (f) Individual tasks; authority accountability listed.
- ✓ (g) Divisional officer and senior rate organisation.
- (h) Planning meetings.
- (i) Planning sheets.
- ✓ (j) Liaison with WE and Operations department.
- ✓ (k) Liaison with co-ordination of other departments.
- (l) Senior EW rating check RNCP 10 Chapter 8.

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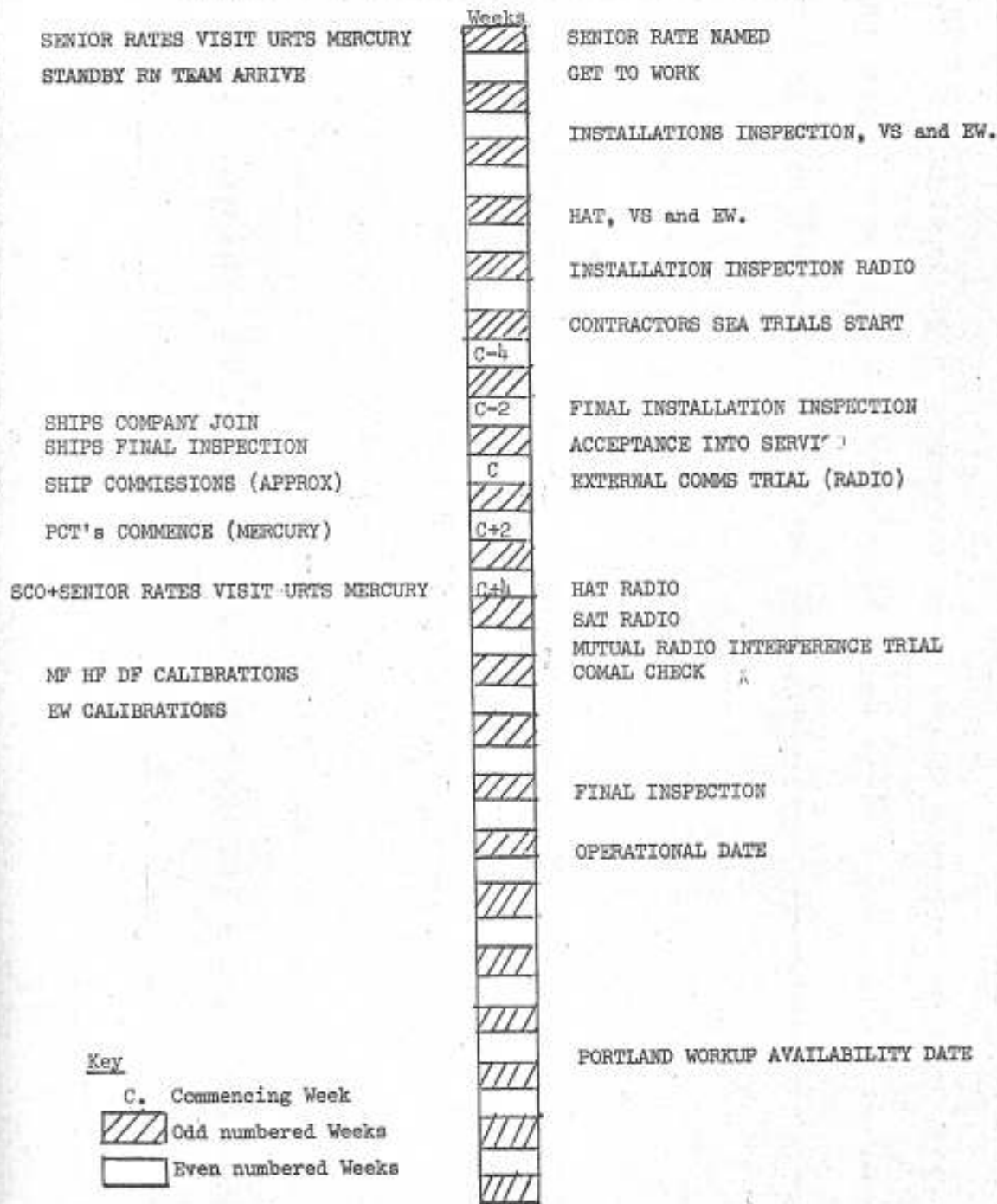
(7) Security.

- ✓ (a) RADHAZ; markings; briefings; board; orders.
- ✓ (b) Safety and First Aid notices.
- ✓ (c) Electrical precautions and safeguards.
- ✓ (d) Safety harnesses (Pattern No 0476-924-4591)
- ✓ (e) Treatment for shock and burns.
- ✓ (f) Procedure in the event of fire.

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ANNEX 1A

SEQUENCE OF EVENTS FOR NEW BUILD SHIPS (MILESTONES)





RESTRICTED

ANNEX 1B

LIST OF FORMS, TELEPRINTER AND CRYPTOGRAPHIC MACHINE,  
STATIONARY STORES USED BY THE COMMUNICATION DIVISION.

1. CERTIFICATES

S.431 Trade Certificate-Electronic Warfare.  
S.1246d Trade Certificate-Tactical.  
S.1246e Trade Certificate-Radio.

2. EXAMINATIONS

S.442 Application for Advancement Examination.  
S.1124 Return of Communication Ratings Examined.  
S.1303a Recommendation to Qualify Professionally for Higher Ratings.

3. F/SIGS SERIES

F/SIGS224 Out/Refile Record.  
F/SIGS225 Route Chit.  
F/SIGS226 Crypto Route Chit.  
F/SIGS227 In Record.  
F/SIGS228 Disposal and Receipt Form.  
F/SIGS229 Tributary Transmit Log.  
F/SIGS230 Tributary Receive Log.  
F/SIGS231 Message Withdrawal Slip.  
F/SIGS232 Tape Relay Centre Receiving Log.  
F/SIGS233 Tape Relay Centre Transmit Log.  
F/SIGS234 Tape Copy Log.  
F/SIGS243 Tape Relay Centre Transmit Log Sheet.  
F/SIGS244 Tape Relay Centre Receive Log Sheet.

4. HISTORY SHEETS

S.1246h History Sheet-Communication Ratings.

5. LOGS

S.1320c Signal Log.  
S.1647 Type 667/8 Log.  
S.1648 Jammed Victims Log.  
S.1649 EW Intercept and Reporting Form.  
B/SIGS.1 W/T Operators Log.

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Annex 1B.

6. MESSAGES

F/SIGS266 Signal Message Form.  
 F/SIGS266 Hecto Master Originators Form.  
 (SPIRIT)  
 S.1320 Naval Message Form White Unclassified.  
 S.1320a Naval Message Form White Classified.  
 S.1326 Private Message Form.  
 S.1555 Signal Message Drafting-Desk Reminder

7. MISCELLANEOUS

S.279 Caution Notice for Display Outside Doors of Crypto Offices.  
 S.1306 Repair and Maintenance Record for Crypto Machines.  
 S.1588 Communications Poster.  
 S.1562 Turnover Information.  
 S.1563 Call Sign Description Card.  
 S.1564 Warship Route Card.

8. MUSTERS

S.1325 Muster of Registered Communication Publications.

9. RETURNS

S.1308 Communication Branch Training Records (Binder).  
 S.1308a Inspection of Training Records.  
 S.1308b Communication Watchbill.  
 S.1308c Record of Communication Practical Exercises.  
 S.1308d Record of Communication Training.

10. TELEPRINTER and CRYPTOGRAPHIC MACHINE STATIONARY STORES

PATT 0574/29258 Ribbon for Cypher Machines.  
 PATT 0574/901-0462 Tape Gummed for Cypher Machines.  
 PATT 0575/901-3392 Teleprinter Rolls (Single Ply).  
 PATT 0575/24922 or 901-0802 Teleprinter Rolls (Two Ply).  
 PATT 0575/24923 or 901-0802 Teleprinter Rolls (Three Ply).  
 PATT 0575/24924 or 901-0803 Teleprinter Rolls (Four Ply).  
 PATT 0575/163304 Teleprinter Rolls (Banda Type D Multi-Ply)  
 Purple Ormig, and Black Carbon on Reverse.  
 PATT 0575/163321 Teleprinter Rolls (Banda Type C Multi-Ply)  
 Black Ormig Only.

NOTES

1. PATTS. 0575/24922 to 24924 are conventionally wound for No. 12 teleprinters.
2. PATTS. 0575/901-801 to 901-0803 are reverse wound for NO.7B teleprinters
3. PATTS. 0575/163304 and 163321 are supplied only to frigates and above, RN Air Stations and communication centres ashore.

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ANNEX 1CSUGGESTED FORM FOR TRAINING CHECK-OFF LIST  
FOR INDIVIDUAL RATINGS

NAME.....

RATING.....

SENIORITY.....

Training Tasks (examples).	Training Carried out; (see Note)						
	1st	2nd	3rd	4th	5th	6th	Final
Type 640, Programmed Test.							
Type 640, Set up, tune and remote.							
Type 692, Tune and Remote.							
RFS, Set up and test							
Emergency aerial AJE - connecting.							
Emergency diesel - start up put on load.							
NAVCOMEX 402.							
Type 634 Set up and use.							

- NOTES. 1. The columns headed 1st to Final show the dates when training was carried out. The "Final" date being the date training was successfully completed.
2. The need to complete the 2nd to 5th columns will depend on the ability of the rating concerned and/or the complexity of the subject.

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## ANNEX 1D

SUGGESTED TRAINING PLANNING SHEETS FOR PROGRAMMING PRACTICAL EXERCISES

1. These planning sheets should be compiled for the practical exercises shown in RNCP 15 chapter 6. They indicate the number of exercises to be completed by the staff for the whole week.

2. The duration for the FRX shows the total time a man is involved for one exercise: i.e. 15 minutes reading and 15 minutes writing down.

<u>PRACTICAL EXERCISE PLANNING SHEET.</u>					
<u>WEEK COMMENCING</u>					
TYPES OF PRACTICAL EXERCISE	DURATION of EXERCISE	NUMBER OF MEN INVOLVED			
		"G"	"T"	"W"	"ALL"
M.M.X.	30 MINS	7	-	-	---
F.R.X.	30 MINS	-	6	-	--
F.T.X.	10 MINS	-	6	-	--
R.R.X.	30 MINS	-	-	8	---
T.T.X.	15 MINS	-	-	-	10
T.P.X.	15 MINS	-	-	-	11

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## ANNEX 1E

SUGGESTED TRAINING SHEET FOR PROGRAMMING TRAINING  
AND EXERCISE PARTICIPATION

1. These planning sheets show all exercise and training activities for the entire staff allocated both daily and weekly.

Communication Division Training and Exercise Planning Sheet Week Commencing.....				
DAY/DATE	TYPE of EXERCISE/TRAINING	PARTICIPANTS	SUPERVISOR	DURATION
MONDAY	TTX	3T	LRO(T)	15 MINS
	TPX	3G	LRO(T)	15 MINS
	RRX	4W	LRO(W)PINK	30 MINS
	JOCOMEX 5	G RATING ON WATCH	LRO(G)	24 HOURS
	NAVCOMEX 405	3T	LRO(T)	60 MINS
	PROVISIONAL EXAM TRAINING	2T-2G-2W	CY/RS/RS(W)	60 MINS
TUESDAY	TTX	3G	LRO(W)PINK	15 MINS
	TPX	3T	LRO(W)PINK	15 MINS
	FRX	2T	LRO(T)	30 MINS
	RRX	4W	LROW GREEN	30 MINS
	NAVCOMEX 405	3G	LRO(G)	60 MINS
	NATO SHIP SHORE (FLC01)	'G' RATING ON WATCH	R.S.	AS REQD
WEDS	TTX	3W	LRO(G)	15 MINS
	TPX	2W	LRO(G)	15 MINS
	MMX	3G	RS	30 MINS
	FTX	3T	CY	3x10 MINS
	O.J.T.	2T-2G-3W	RO1(G/T/W)	60 MINS
THURSDAY	TTX	3W	LRO(W)PINK	15 MINS
	TPX	1 G	LROW GREEN	15 MINS
	FRX	4T	CY	30 MINS
	MMX	4G	LRO(G)	30 MINS
	EWX 22	4W	LROW GREEN	60 MINS
	PROVISIONAL EXAM TRAINING	2T-2G-2W	CY/RS/RS(W)	60 MINS
FRIDAY	FTX	3T	LRO(T)	3x10 mins
	SPARE FOR PRACTICALS IF REQUIRED	6T-7G-8W (as required)	LROT/G/W (as reqd)	30 MINS

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ANNEX 1F

COMPILING THE DIVISION WATCH AND STATION BILL

1. Watches

a. Three factors decide the number of watches that the division will work at any time:-

- (1) The Operational Requirement.
- (2) The Complement of the Division.
- (3) The Ships Policy.

b. When the three factors above have been satisfied, the aim should be to employ the least number of men on watch at any time.

2. Presentation

a. The Watchbill should be presented in such a way that any possible eventuality during the commission can be readily covered by it. Form S1308b is to be used.

3. Watchkeeping System

a. The Watchbill planning sheet shows the 2/4 and 3/6 systems. Changes from one system to the other cannot be achieved without some acceptable inconvenience.

4. Watchbill Planning Sheet

a. To complete the watchbill consider each sub-division separately. Sub-divisional liaison is necessary to ensure balanced watches. e.g.

- (1) Select ratings from the 'G' sub division and satisfy the 6 watch system (if impossible, then satisfy the 4 watch system). Example shown at Appendix A.
- (2) Select ratings from the 'T' and 'W' sub divisions in the same manner.

b. An example of a completed planning sheet is shown at Appendix B. When the optimum watchbill has been produced details should be transferred to form S1308b.



# ANNEX 1F

## APPENDIX A

### COMPILING THE WATCHBILL PLANNING SHEET (A)

3 WATCHES	6 WATCHES	2 WATCHES	4 WATCHES	RATINGS BORNE
RED	FIRST	PORT	FIRST	RO1(G) SMITH
	SECOND		DAYMAN	JO1(G) JONES
WHITE	FIRST	STED	SECOND	RO2(G) ABEL
	SECOND		FIRST	RO3(G) GREEN
BLUE	FIRST		DAYMAN	RO2(G) BROWN
	SECOND		SECOND	RO2(G) CLARK





ANNEX 16.

SUGGESTED HEADINGS FOR <sup>The</sup> COMMUNICATIONS SECTION OF SHIP'S ORDERS

CHAPTER 1 - GENERAL

1. DRESS FOR DUTYMEN
2. SMOKING
3. CEREMONIAL
4. DELAYS IN CLEARING MESSAGES
5. SERVICE AND PROCEDURE MESSAGES
6. DEFECTS
7. TURNOVER LOGS
8. TIME CHECKS
9. RECORDS AND RETURNS
10. FLYING STATIONS
11. SEABOAT
12. OPERATION AMKWARD
13. LANDING PARTY
14. BOARDING PARTIES
15. NBCD

CHAPTER 2 - TACTICAL SUB-DIVISION

1. SIGNAL DECK WATCH
2. SIGNAL PROJECTORS
3. THE BRIDGE SAFE
4. TELESCOPES AND BINOCULARS
5. EMERGENCY ARRANGEMENTS -
6. POST ACTION SIGNALLING
7. COMMUNICATIONS WITH MERCHANT VESSELS
8. RECOGNITION
9. LIAISON WITH MCO AND EWO

### CHAPTER 3 - GENERAL SUB-DIVISION

1. TACTICAL COMMUNICATIONS
2. CRYPTOGRAPHY
3. READINESS OF EQUIPMENT
4. EMERGENCY ARRANGEMENTS
5. PORTABLE RADIO EQUIPMENT
6. DISTRESS ORGANISATION

### CHAPTER 4 - WARFARE SUB-DIVISION

1. INTERNAL PROMULGATION OF ELECTRONIC EMISSION POLICY
2. REPORTING INTERCEPTS
3. INTERCEPT LOG
4. TYPE 668 AERIALS (AYO)

### CHAPTER 5 - MESSAGE PROCESSING

1. GENERAL
2. OFFICERS AUTHORISED TO RELEASE SIGNALS
3. OUT TRAFFIC - GENERAL
4. IN TRAFFIC
5. OUT TRAFFIC - NOT REQUIRING OFF-LINE ENCRYPTION
6. OUT TRAFFIC - REQUIRING OFF-LINE ENCRYPTION
7. REFILE TRAFFIC
8. HAND MESSAGES
9. MESSAGES HANDLED AT POSITIONS OUTSIDE THE MCO
10. SPECIAL HANDLING INSTRUCTIONS
11. MESSAGE FILES
12. SERVICE TELEGRAMS
13. PRIVATE TELEGRAMS

## CHAPTER 6 - SIGNAL MESSAGE DISTRIBUTION

1. GENERAL
2. ACTION OFFICERS
3. RUSH DISTRIBUTION
4. OPERATIONAL DISTRIBUTION
5. WELFARE MESSAGES
6. AIRMOVE MESSAGES
7. ENEMY REPORTS
8. DISTRIBUTION GUIDE

## CHAPTER 7 - TELEPHONE EXCHANGE (NOTE: IF COMMS DIVISION ACCOUNTABLE)

1. RESPONSIBILITY AND MANNING
2. INCOMING CALLS
3. OUTGOING CALLS
4. DEFECTS

## CHAPTER 8 - RADIO HAZARDS

1. GENERAL
2. TYPES OF HAZARD
3. MAN ALOFT
4. FOREMAST EXCITATION
5. ANF WHIP EXCITATION
6. RESPONSIBILITY AND ORGANISATION
7. ACTIVITIES SUBJECT TO RADIO HAZARD
8. RADHAZ PRECAUTIONS REQUIRED IN OWN SHIP
9. RADHAZ PRECAUTIONS IN ADJACENT SHIPS

NOTE: Dependent on ship the 'Task Descriptions' for SCO, Senior Communication Rating etc (See Practical Management in Ships) can be included in communications section.

# RAS COLD STATEBOARD

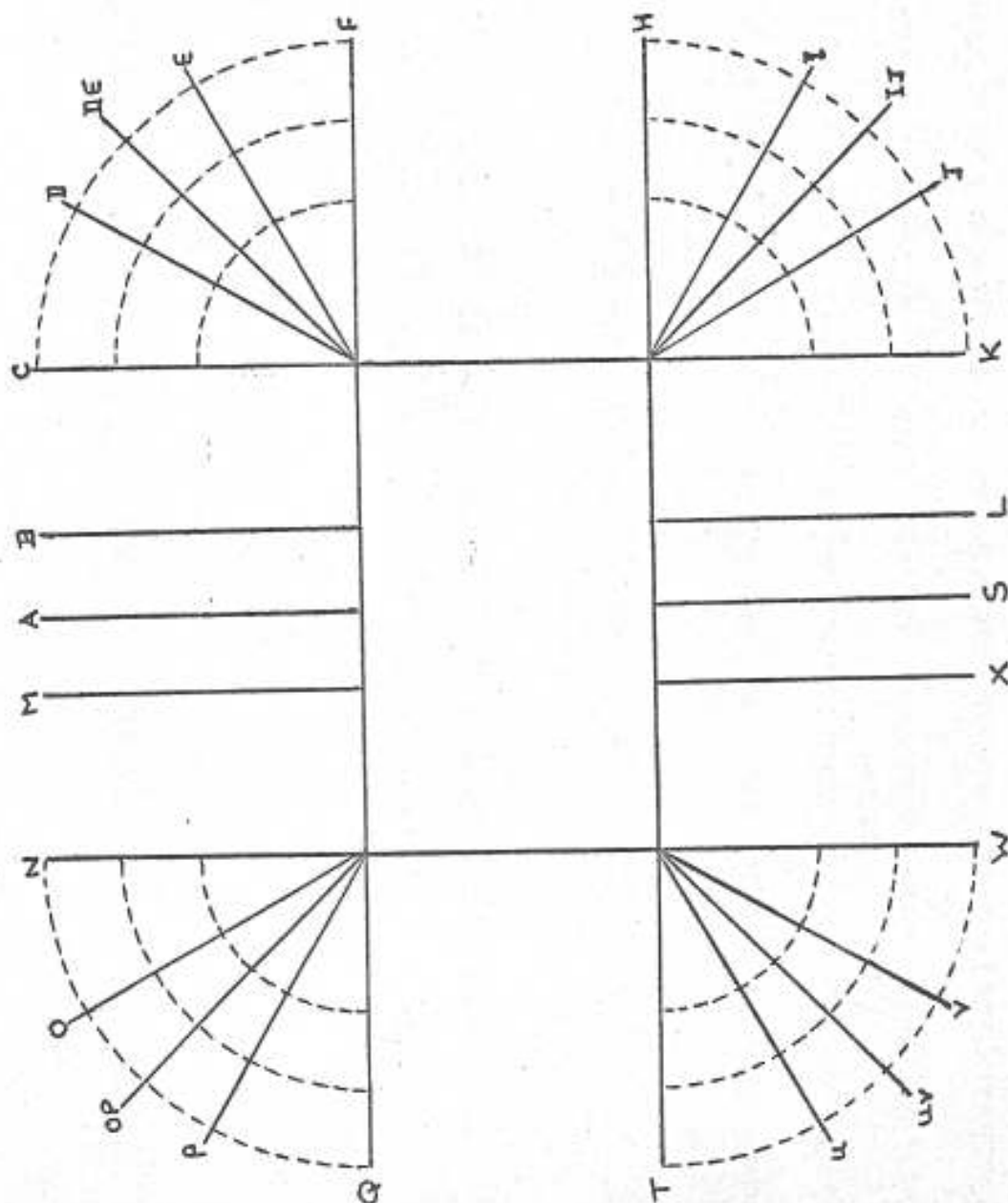
Notes: Each Time Designator Represents 20 Minutes.

RAS COLD STATEBOARD									
C		R/V TIME		R/V POSITION		D		COURSE	
E		URG FORMATION				P		ORDER OF R.A.S.	
TIME		SUPPORT SHIP				SUPPORT SHIP			
DISG									
WATOR									
		A PORT	B ASTERN	C HELO	D STED	E PORT	F ASTERN	G HELO	H STED
		I PORT	J ASTERN	K HELO	L STED				
1	1								
2	1								
3									
4									
5	2								
6									
7									
8	3								
9									
10									
11									
12	4								
13									
14	5								
15									
H		ARRANGEMENTS FOR STORES DEMANDS				J			
K		ESTIMATED TOTAL FUEL REQUIRED FROM EACH TANKER							
L		MAIL DISTRIBUTION ARRANGEMENTS							
M		LIFEGUARD				N			
P		BREAKAWAY EXERCISE				Q			
R		HEAVY SHIP STATION				S			
						SCREEN COMMANDER			
						ECCENTRIC RELIEVE			
						ON STATION			
						HEAVY SHIP			

# SKELETON SCREENING DIAGRAM

## ANNEX 1 I

### RECOMMENDED SKELETON SCREENING DIAGRAM STATEBOARD



# SUBEX STATEBOARD

SERIAL

SUBMARINE

DATE

DIVING SIGNAL RECEIVED

DIVED AT:

SUBMARINE

TIME

CHECK REPORT:

NOTE: Can be incorporated on HCO stateboard or as part of RIC bench information.

SURFACING SIGNAL RECEIVED

INDICATOR BUOYS

SUBMARINE

FWD

APT

COMMUNICATIONS

SUBMARINE

CALLSIGN

BROADCAST

TACTICAL



# OPEN ALFA STATEBOARD

OPEN ALFA  
SERIAL NO.

## EXERCISE/OPERATION:

A	B	C	D	E	F	G	H
FOR INTENTION COVERED	DATE TIME MOVEMENT	DATE TIME IN FORCE	POSITION	POSITION	COURSE	SPEED	GRID GUARD (IF OTHER THAN
GRID ORIGIN							
GENERAL	1. OTC			14. WINDOW GUARD SHIP			
DUTIES	2. SCREEN COMMANDER			15. HELICOPTER SUB CONTROL SHIP			
	3. FORCE ANTI-AIR WARFARE SHIP			20. SHOTCR ANTI-AIR WARFARE SHIP			
	4. ELECTRONIC WARFARE CONTROL SHIP			21. LOCAL ANTI-AIR WARFARE SHIP			
	5. A.S.W. AIRCRAFT CONTROL SHIP			22. AIR RAID REPORTING CONTROL SHIP			
	6. HELICOPTER CONTROL SHIP			23. A.A.W. PICKET			
	7. SURFACE RAID REPORTING CONTROL SHIP			24. TONCAT PICKET			
	8. SUB SURFACE RAID REPORTING C.S.			25. G.A.P. CONTROL SHIP			
	9. RADIO HAZARD RELAY SHIP			26. AEM CONTROL SHIP			
	10. PLANE GUARD			27. LINK 11 NET CONTROL SHIP			
	11. SEARCH AND RESCUE SHIP			28. LINK 14 BROADCAST SHIP			
	12. BATHYTHERMOGRAPH GUARD			29. AIR STRIKE SAFETY SHIP			
	13. S.S.N. CONTROL SHIP						
E. SPEED	OPERATIONAL SPEED						
F. ENGAGE PLAN	SEE ATP1 (A) VOL I CHAPTER 22						
G. CSP	SEE ATP1 (A) VOL II CHAPTER 16						
H. DEVICES IF READY FOR ATP 1 VOL I CHAPTER 17	ANTI-AIR	ANTI-SUBMARINE	ANTI-SHIP				DAMAGE CONTROL STATE AND CONDITION

STATIONING SPEED

NOTE: Used as a form or placed between perspex sheets.

Portable.

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ANNEX 1L

SAR Communications Stateboard

1. The purpose of this stateboard is for the senior (G) rating to promulgate detailed unstructions as how the ships radio equipment should be employed in the event of the ship sailing for SAR operation when he is ashore.
2. Considerations should be given to displaying these instructions in the MCO Turn-Over Book instead of on a state-board.
3. Appendix A shows the basic stateboard; Appendix B shows an example of the stateboard completed in detail.

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ANNEX 1 L

Appendix A

RECOMMENDED SAR COMMUNICATIONS STATEBOARDSAR COMMUNICATIONS

If RN ships and aircraft are on a common frequency plan the existing plan should continue to be used. The plan in RNCP 3 is designed for ships and aircraft not using a common plan. It can be ordered by Commander SAR at an early stage.

If the ship is made the Force Commander or is ordered to set watch in accordance with RNCP 3 Chapter 4 action to man following circuits/nets is to be taken

CIRCUIT	FREQ	EMISSION	TX/RX-CHAN NO.	CALLSIGNS	REMOTE	PART OF FORCE	COMMANDER SAR	REMARKS
Ship B/C	Various	F1		-				RNCP 14
Ship-Shore	Various	F1		-				RNCP 14
Scene of Air-Sea Rescue Primary		V		iaw RNCP 3 Chapter 4				For communication with UHF fitted lifeboats and aircraft.
Scene of Air-Sea Rescue Secondary		V		iaw RNCP 3 Chapter 4				Controlled by RCC and guarded by patrol aircraft
Search Force TAC UHF		V		iaw RNCP 3 Chapter 4				For passing of tactical information.
Search Force TAC HF		CW		iaw RNCP 3 Chapter 4				When out of UHF range.
Search Force REP		V		iaw RNCP 3 Chapter 4				Between AIO's of surface ships.
Distress A/C UHF International		V CW/AUTO		iaw RNCP 3 Chapter 4				Communications with Merchantmen may be on 500kHz or VHF Channel 16.

Books required:

RNCP 3

Britt Supp No 1 to ATP 10A

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ANNEX 1L  
APPENDIX B

## EXAMPLE OF COMPLETED SAR COMMUNICATIONS STATEBOARD

CIRCUIT	FREQ	EMIS- SION	TX/RX CHAN No.	CALLSIGNS	REMOTE	PART OF FORCE	COMDR SAR	REMARKS
SHIP BROADCAST	VARIOUS	P1	CJA1/2 CJD1	--	B/Cbay	R	R	RNCPT14
SHIP SHORE	VARIOUS	P1	TDA1 CJA3	---	S/Shay	W	W	RNCPT14
SCENE OF AIR- SEA-RESCUE PRI	282.8	V	691(2) Chan 10	Rncp-3 Chap 4	B'dge Ops	X	XC	For communication with UHF Lifeboats and A/C.
SCENE of A.S.R. SECONDARY	5695.5/ 3095	CW	CJA4 TDA2	Rncp 3 Para 406	MCO	T	T	Controlled by RCC and Guarded by patrol A/C
SEARCH FORCE TACTICAL UHF	279.4	V	691(1) Chan 5	--	B'dge	X	XC	Passing to Tactical Inform- ation
SEARCH FORCE TACTICAL HF	2196	CW	CJA5 TDA3	--	B'dge	XW	XCW	When out of UHF range.
SEARCH FORCE REPORTING	277.8	V	691(3) Chan 2	--	Ops	X	XC	Between A/c's of surface ships
"DISTRESS" A/C UHF	243.0	V	692/1 Chan 8	--	Ops	L	L	Comms with Merchantmen may be on 500Khz or VHF (16)
INTERNATIONAL	500	cw/auto	FM16 TDA3	--	MCO	L	L	

## SAR COMMUNICATIONS

1. If RM ships and aircraft are on a common frequency plan the existing plan should continue to be used
2. The plan in RNCPT 3 is designed for ships and aircraft not using a common plan. It can be ordered by the Commander SAR at an early stage.
3. If this ship is:
  - a. Made force commander or
  - b. Ordered to set watch i.s.v. RNCPT 3 CHAP 4 the following action is to be taken:

NOTES Books required:

RNCPT 3

BRIT SUPP No1 to ATP10A.

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ANNEX 1M

SUBMISS-SUBSUNK-SMASHEX COMMUNICATIONS STATEBOARD

1. The purpose of this stateboard is for the senior (G) rating to promulgate detailed instructions on how the ships radio equipment should be employed in the event of the ship sailing for an SAR operation when he is ashore.
2. Consideration should be giving to displaying these instructions in the MCC turn-over book instead of on a stateboard.
3. Appendix A shows the basic state-board:  
Appendix B shows an example of the stateboard completed in detail.

## RECOMMENDED SUBMISS-SUBSUNK-SMASHEX

## COMMUNICATIONS STATEBOARD

## SUBMISS - SUBSUNK - SMASHEX COMMUNICATIONS

COMCHECK. On receipt of the signal, search is to be carried out on Ship-Shore and Sub Safety frequencies. Then as required by the Senior Officer

SUBMISS - SUBSUNK - SMASHEX. On receipt of the signal, the following complan is to be put into effect.

CIRCUIT	FREQ	EMISSION	EQUIPMENT	CALLSIGNS	REMOTE	WATCH DESIG	REMARKS
Ship B/C	Various	F1		-			RNCP 14 refers. Setting watch signal to conducting authority and Broadcast Control Station.
Ship-Shore	As required	F1		-			RNCP 14.
S/M indicator buoy		A1		Inter-national			Search to be carried out with D/F equipment. Canadian submarines use 4186.5 kHz. Reference RNCP 3 Paragraph 416.
SAR TAC UHF		V		Inter-national			Tactical communications between surface ships and submarines.
SAR REP UHF		V		Inter-national			Between AIO's of surface ships.
SAR Primary		V		Inter-national			Between search force and co-operating A/C.
ASW 1		V		Inter-national			To pass information between A/S plots.
ASW 2		V		Inter-national			As allocated by SOSF.
ASW 3		V		Inter-national			As allocated by SOSF.

## SENIOR OFFICER SEARCH FORCE (SOSF)

1. If detached as SOSF, the conducting authority will probably establish a Subsunk MRL.  
Frequencies as listed in RNCP 3 Paragraph 413.b. *413.b. 413.c. 413.d.*
2. The ship will automatically become control station for the following circuits:-  
SAR TAC UHF, SAR REP UHF, SAR Primary and ASW 1, 2 and 3.
3. For further details consult RNCP 3 Chapter 4, and Britt Supp No 1 to ATP 10A.



## EXAMPLE OF COMPLETED SUBSUNK-SMASHEX COMMUNICATIONS

(TABLE 1001)

SUBMISS - SUBSUNK - SMASHEX COMMUNICATIONS

CHECK: On receipt of signal, search is to be carried out on Ship Shore and Sub Safety Frequencies. Then as required by Senior Officer.

ISS - SUBSUNK - SMASHEX On receipt of signal the following Confem is to be put into Operation:-

FREQ	EMISSION	EQUIPMENT	CALL SIGNS	REMOTE WAY	WATCH DESIGNER	REMARKS
VARIOUS	F3	CRA 2. CDD 1	—	T/C WAY	R	RAC P44 Repas: Setting = White Signal to Conducting Authority and Broadcast Control Station.
AS REQ	F3	TDA 1 CTA 1	—	TAC BAY	XW	RAC P44.
4340/ 4186.5*	CW	FH 4	INTERNATIONAL	FWO	R	Signal to be carried out with D/F Equipment. Conclude C Subj use 4186.5.
279.4	V	691/1 CHAN 5	— " —	BRIDGE OR ROOM	X	REF RAC P3 PARAGRAPH 16 TACTICAL COMMUNICATIONS BETWEEN SURFACE SHIPS AND SUBMARINES.
277.8	V	691/3 CHAN 2	— " —	OPS ROOM	X	BETWEEN AIO'S OF SURFACE SHIPS.
282.8	V	691/2 CHAN 10	— " —	OPS ROOM	X	BETWEEN SEARCH FORCE 1 AND CO-OPERATING A/C.
299.4	V	692(3) 8	— " —	OPS ROOM	X	TO PASS INFORMATION BETWEEN A/C PLATS.
230.2	V	692(3) 9	— " —	— " —		AS ALLOCATED BY S.O.S.F.
300.7	V	692(3) 10	— " —	— " —		— " —

OFFICER SEARCH FORCE (S.O.S.F)

1. If alerted as S.O.S.F. the Conducting Authority will publicly establish a "Sub Subj MRA". Frequencies as listed in RAC P3 SPARA 41573.
2. The ship will automatically become Control Station for following CTS:-  
SAR-TAC UHF, SAR REP UHF, SAR PRIMARY AND ASW, 1, 2 & 3.
3. For further details consult RAC P3 CHAP 4, AND BRIT SUPP NOT TO ATP 10A.



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ANNEX 1N

EMERGENCY DESTRUCTION ORDERS.

1. Safe Contents.

- (a) The following are the stowage arrangements for classified material in the MCO.

SAFE 1 Cryptographic material.

SAFE 2 Special handling material/SCO & CRS file safe.

SAFE 3 Maintainers classified handbooks.

SAFE 4 Registered ACPs.

SAFE 5 Non-registered ACPs.

- (b) Each safe contains a muster list for the contents, and emergency destruction details for the contents.

- (c) Safes 1 & 2 may contain superceded/reserve material in marked envelopes. Weighted bags are stowed in the cupboard below Safe number 1.

2. Preparation for Emergency Destruction.

- (a) On receipt of the order "PREPARE FOR EMERGENCY DESTRUCTION" the senior rating present in the MCO is to carry out the following:
- (1) Obtain combinations for all safes from the sealed envelope in the key safe.
  - (2) Open all safes.
  - (3) Remove any superceded/reserve material from safe numbers 1 & 2 and place in a weighted bag.
  - (4) Return keying material/documents in use to appropriate safes (except on-line keying material in use.)
  - (5) If time permits muster the contents of each safe.
  - (6) Await further orders, remaining at the safes (safes open).

3. Emergency Destruction.

- (a) When the order to carry out emergency destruction is received the senior rating in the MCO is to detail hands to carry out the following:

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- (1) Commence removing contents of safes 1 & 2 and begin destroying by, a. Shredding b. Smashing beyond recognition.  
Note; Destruction tools are on fwd. bulkhead.
- (2) Commence destroying equipment (debris to be bagged if possible for ditching over the side)
- (3) Do not remove documents/material from safes until you are ready to destroy them.
- (4) If time begins to run out, remove contents of safes, place in sacks and carry aft to burn in portable incinerator.
- (5) If ship is sinking the order may come to lock all safes; therefore do not begin destroying out of sequence.

Note: On completion of destruction/locking these instructions are to be destroyed.

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210. Common faults observed during Work-Up

a, Attention to the following will avoid embarrassment to <sup>H&L</sup> senior ratings during the Work-Up:-

- (1) Briefing. Failure of communication ratings to read exercise orders and failure of senior ratings to keep their staffs briefed has resulted in:-
  - ✓ (a) <sup>EW</sup> Tactical operators not knowing the names and whereabouts of ships in company or the identity of the OTC.
  - ✓ (b) EW operators being late in setting watch and in some cases being entirely ignorant of the EW organisation in force..
  - ✓ (c) <sup>EW</sup> Users of radio nets being unaware of the name or the nature of the net they were manning.
- (2) Liaison. Lack of liaison has resulted in:-
  - (a) Messages being passed by ship/shore to ships in VS range.
  - ✓ (b) Valuable information being lost to the Command from a partially corrupt message not being reported.
  - (c) Originators being unaware that it had not been possible to clear important messages.
  - (d) The Command being unaware that there has been a power failure in the MCO.
  - (e) The MCO not being told when communication had been lost on an Operations Room net.
  - (f) Intercepted messages containing information of great interest and value to the Command not being reported because the ship concerned was not included in the address.
  - (g) Messages not being handled in accordance with the precedence.
  - (h) No up-to-date position available in the MCO.
  - (i) No weather reports passed ashore when it has been necessary to break radio silence.
  - ✓ (j) Operations Room personnel not knowing the effective NUCC or Authentication Table.

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(3) Radio

- ✓ (a) Failure to set watch on circuits by thr correct time.
- (b) Reluctance by ROs to suspect own equipment when communication is lost.
- ✓ (c) Failure to check equipment from user's position.
- (d) Failure to clear urgent traffic on an alternative net when communication has been list on the net on which it would normally be passed.
- (e) Carelessly tuned transmitters (eg. resonators not tuned to the frequency).
- (f) Poor RATT Broadcast reception caused by incorrect setting up of equipment.
- (g) HF receiver outputs being fed into V/UHF voice circuits because the B40 in a parallel W/T office bay has not been isolated from the remote control system.
- (h) Gryo rings on DF sets not aligned to ship's head or checked regularly.
- (i) Using emergency power supplies when power is still available from the alternative supply.
- (j) Lack of attention to wire aerials and deck insulators. (Frayed whipping, corroded connectors, DI's not greased).
- (k) Failure to listen out before transmitting on a morse net.
- (l) Operators transmitting at a speed beyond their own capability and that of the receiving operator.
- (m) Messages not authenticated.

(4) Security

- (a) HF silence indiscriminately broken because:-
    - (1) Operators did not know or did not understand the policy in force.
    - ✓ (2) Electronic Emission Policy boards not placed.
  - (b) A general lack of knowledge of the meaning of communication Security Policies 1, 2 and 3.
  - (c) Circuit numbers and tactical callsigns compromised by care-less linkages.
- VGS

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- (d) NUCO and Authentication tables not readily available.
- (e) Failure to use NUCO.
- (f) Failure to carry out the daily muster of books on loan to the Communications Division.
- (g) Muster boards not signed by an Officer. Corrections to muster boards not signed by the same officer.
- (h) Page by page musters of communications and cryptographic publications not carried out in accordance with BR 4005.

(5) Electronic Warfare

- (a) Inefficient use of HF receiver controls.
- (b) Failure by the EWD to pass evaluated EW information to the remainder of the force, (eg. establishing a racket area) on appropriate net.
- (c) Failure to carry out operators check on DF equipment.
- (d) Ineffective control of EW Co-ordination net resulting in procedure errors and poor voice technique.
- (e) Failure by PWO to keep EW Office informed of the tactical situation.
- (f) Failure to include a position when an intercept is gained during CASEXES.
- (g) Failure to pass out threat signals on appropriate circuits (ie. Sub-Surface/Surface threat on EW Co-Ordination and Reporting UHF).

(6) Visual Signalling

- (a) Insufficient delegation. CCYs/CYs and LROs (T) must resist the temptation to man signalling lamps personally)
- (b) Poor VS lookout and alertness.
- (c) Slackness or complete failure in acknowledge salutes from passing merchant ships.
- (d) Using an inadequate light for recognition challenge and reply and ignorance of the correct recognition procedure by VS ratings.
- (e) Badly trained signalling lanterns.
- (f) Insufficient time allowed between ordering and excuting screens.

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- (g) Unnecessary use of the Immediate Executive method.
- (h) Poor reporting to the Command
- (i) Signal groups not interpreted correctly.
- (j) Address of tactical signals not reported.
- (k) Failure to ensure that the officer concerned has received the signal and acknowledged its receipt.
- (l) No time group appended to groups transmitted by voice or radio.
- (m) Equipment.
  - i Frayed halyard splices.
  - ii Torn and dirty flags.
  - iii Grease nipples on SPs clogged with paint.
  - iv Dirty and cracked SP reflectors.
  - v Power leads to 10" SPs not led through clamp on trunnion arm.
  - vi Inside of SPs rusty and flaking.
  - vii Wrong materials used to clean reflectors.
  - viii No Aldis and battery available during power failures.
  - ix Bearing alignment rings of 20" SPs incorrectly aligned.

(7) Voice Operating.

- (a) Incorrect procedure.
- (b) Poor voice techniques.

✓ (8) NBCD. A poor knowledge of the NBCD organisation has resulted in:-

- ✓ a. Failure to provide reliefs for operators.
- ✓ b. Equipment left uncovered on the Flag Deck and open bridges during fallout and prewetting.
- ✓ c. Communication ratings being the major offenders in failure to wear anti-flash gear or even to have it to hand.

✓ (9) Stowage for Sea. Valuable equipment damaged because of slack and failure to secure for sea.

✓ VSS



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ANNEX 2A

EXERCISE PLANNING GUIDANCE

1. EXERCISE PREPARATION

- a. Communications Exercises Planned on FF 10 should be brought to the attention of the operations Officer in sufficient time for him to incorporate them (where applicable) in the ship's WPP.
- b. Those exercises involving other ships require to be ordered i.a.w. the ordering tables from the appropriate exercise publication. The aim should always be to give the maximum possible notice to other units to enable them to plan accordingly.
- c. The training planning sheet (Annexes 1D and 1E) when transferred to the divisional daily allocation sheets see(SMS Handbook) enables men to see what exercises they are involved in each day, together with the times they are to take place.
- d. It is advisable that the rating in charge of these exercises produce a brief or make sure that all participants are aware of all relevant facts necessary to ensure the smooth running of them  
e.g. (1) Who is conducting/controlling the exercise.  
(2) What positions are required to be manned.  
(3) What callsigns and procedures are to be used.  
(4) What tools are required:  
eg Headsets/Microphones - Logs - Publications  
- Crypto material - Question sheets etc  
(5) What records are required.

2. RECORDING THE RESULTS

- a. Objective. To analyse results to decide:
  - (1) Whether a ship requires more programme time and exercise facilities.
  - (2) Whether the total scores or results obtained are of the required standard.
  - (3) Whether operators are maintaining their OPS.
- b. Methods: (1) 18 week period returns of Fleet Form 10 (for all sections of the ship) together with comments of section head and C.O.  
(2) Signalled reports of communications exercises i.a.w. the formats from relevant exercise publications.

YES



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- (3) Weekly record of all communications division exercises/  
training on forms S1308C and S1309D.

YES  
✓  
1/3

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CHAPTER TWO

SHAKE-DOWN AND WORK-UP

201. General

a. Preparations for shake-down and work-up should start as soon as possible and much of the activity outlined in Chapter 1 is towards this end.

b. The Sea Training Work-up Guide (STWG) must be studied in detail. There are many sections which concern communications and EW other than Section 5.

202. Management points during the Work-Up

a. Much of the success of the communication division in the Work-Up will depend on:

(1) Delegation.

(a) Assess the ability of those junior to you and delegate whenever possible.

(2) Preparation.

(a) Senior (G) and (W) ratings and senior RP ratings plan for the following days events.

(b) Senior (G) ratings draw up comprehensive COMPLAN for the following days events.

(c) Check equipment from ser positions with microphone/handsets which will be used

(d) If possible, test circuits with other ships before sailing

(e) Ensure equipment and operators are ready at the right place, on the right frequency at the right time.

(3) Security.

(a) Insist on compliance with cryptographic, physical and transmission security at all times.

(b) Ensure the EMCON policy can be promulgated expeditiously.

(4) Briefing.

(a) Brief operators on the outline of an exercise and on the details of their particular duties in clear and objective language.

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- (b) Keep operators up-to-date with the tactical situation
- (c) Brief non-communication users is essential circuit details.

(5) Liaison

- (a) Effect good two way working liaisons-eg;

    Ew Office-Operations Room,

    Bridge-Operations Room.

    Bridge-Flag Deck.

    MCO-Bridge

    MCO-Operations Room

    Communication Division-WEO

- (b) Use the Divisional Co-Ordinator.

- b. The above points are covered in greater detail in the STWG.

203. Communication training and exercises

a. Chapter 1 deals with the requirements for basic training in ships and the management organisation needed to implement it. The information in this chapter deals with the broader aspects of training and participation in EW, communications and associated exercises.

b. In addition to the books listed in paragraph 117 the following references should be used by the Senior Communications Ratings, and particularly, the Training Co-Ordinator (see paragraph 114B):-

<u>Publication/Form</u>	<u>Contains details of</u>
(1) AXP 1	Communications required for standard ASW exercises.
(2) AXP 2	Communications required for all exercises other than those in AXP 1 and 3 and RNCP 12
(3) AXP 3	Standard NATO and RN communications exercises
(4) RNCP 12	EW exercises.
(5) FXTI	Bogey requirements and Fleet Form 10.

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<u>Publication/Form</u>	<u>Contains details of</u>
(6) JSP 2	Joint Communications Exercises.
(7) STWG	Work-Up requirements

c. The prime objective during the Work-Up is for all ratings to achieve their Operational Performance Standards and, if possible, to commence attaining the OPS of the next higher rate. To this end:-

- (1) Weekly practical exercises must be read in accordance with RNCP 15.
- (2) Each sub-division must participate to the maximum in the Weekly Communication Exercise Programme (WCXP)
- (3) Internal communication and EW exercises should be arranged.
- (4) Exercise the communication organisation for:
  - (a) manning the seaboard
  - (b) landing and boarding parties
  - (c) Operation Awkward
  - (d) Operation Searcher.
  - (e) Enemy Contacting Reporting.
- (5) Participate in NGS and Joint Communication Exercises.

d. Full details of communications exercise requirements at Portland are contained in Annex Alfa to the Portland Weekly Practise Programme. Details of conduct and reports required are in STWG Section 5.

e. Planning guidance is given in Annex 2A.

204. Planning the training and exercises programme

a. Short term planning.

- (1) Objectives. To produce a weekly divisional training and exercise programme which includes:
  - (a) Communication exercises detailed from the Fleet Form 10 (FF 10) for that week
  - (b) Weekly practical exercises (RNCP 15).

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- (d) NUCO and Authentication tables not readily available.
- (e) Failure to use NUCO.
- (f) Failure to carry out the daily muster of books on loan to the Communications Division.
- (g) Muster boards not signed by an Officer. Corrections to muster boards not signed by the same officer.
- (h) Page by page musters of communications and cryptographic publications not carried out in accordance with BR 4005.

(5) Electronic Warfare

- (a) Inefficient use of HF receiver controls.
- (b) Failure by the EWD to pass evaluated EW information to the remainder of the force, (eg. establishing a racket area) on appropriate net.
- (c) Failure to carry out operators check on DF equipment.
- (d) Ineffective control of EW Co-ordination net resulting in procedure errors and poor voice technique.
- (e) Failure by PWO to keep EW Office informed of the tactical situation.
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- (f) Insufficient time allowed between ordering and excuting screens.

	X	X	/	X	X	O	/	/	/	/	8 4
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- (b) Keep operators up-to-date with the tactical situation
- (c) Brief non-communication users is essential circuit details.

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- (a) Effect good two way working liaisons-eg;

    Ew Office-Operations Room,

    Bridge-Operations Room.

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    MCO-Operations Room

    Communication Division-WEO

- (b) Use the Divisional Co-Ordinator.

- b. The above points are covered in greater detail in the STWG.

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(1) AXP 1	Communications required for standard ASW exercises.
(2) AXP 2	Communications required for all exercises other than those in AXP 1 and 3 and RNCP 12
(3) AXP 3	Standard NATO and RN communications exercises
(4) RNCP 12	EW exercises.
(5) FXTI	Bogey requirements and Fleet Form 10.



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CHAPTER TWO

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(a) Assess the ability of those junior to you and delegate whenever possible.

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(a) Senior (G) and (W) ratings and senior RP ratings plan for the following days events.

(b) Senior (G) ratings draw up comprehensive COMPLAN for the following days events.

(c) Check equipment from ser positions with microphone/handsets which will be used

(d) If possible, test circuits with other ships before sailing

(e) Ensure equipment and operators are ready at the right place, on the right frequency at the right time.

(3) Security.

(a) Insist on compliance with cryptographic, physical and transmission security at all times.

(b) Ensure the EMCON policy can be promulgated expeditiously.

(4) Briefing.

(a) Brief operators on the outline of an exercise and on the details of their particular duties in clear and objective language.

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- (b) Test low power HF transmitters with a continental stations.
- (c) Test V/UHF sets with a ship or shore station at ranges greater than 16 miles.
- (d) Test all portables including Stornophones.
- (e) Test FST and A2 with another station.
- (f) MCO RIC Meteorological Area Chart.
- (g) MCO RIC COMPLAN extracts.
- (h) PCS board at DF bay.
- (i) Senior EW rating check RNCP 10 Chapter 3.
- (j) Provision of alternative equipment for the more important nets.
- (k) Provision of ready information as shown in Chapter 1 Annexes 1H to 1M.

(2). Training and Exercises

- (a) Authentication and Numeral Codes.
- (b) Study FXTI and FOTI
- (c) Fleet Form 10.
- (d) Emergency Procedures
- (e) Training for Advancement.
- (f) Enemy Contact Reporting.
- (g) Naval Gunfire Support.
- (h) JOCCOMEX
- (i) NAVCOMEX
- (j) Operation AWKWARD.
- (k) Boarding and Landing parties.
- (l) Board and Tow
- (m) Annex Alfa to the WPP.
- (n) Senior EW rating check RNCP 10 Chapter 3.

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- (g) Unnecessary use of the Immediate Executive method.
- (h) Poor reporting to the Command
- (i) Signal groups not interpreted correctly.
- (j) Address of tactical signals not reported.
- (k) Failure to ensure that the officer concerned has received the signal and acknowledged its receipt.
- (l) No time group appended to groups transmitted by voice or radio.
- (m) Equipment.
  - i Frayed halyard splices.
  - ii Torn and dirty flags.
  - iii Grease nipples on SPs clogged with paint.
  - iv Dirty and cracked SP reflectors.
  - v Power leads to 10" SPs not led through clamp on trunnion arm.
  - vi Inside of SPs rusty and flaking.
  - vii Wrong materials used to clean reflectors.
  - viii No Aldis and battery available during power failures.
  - ix Bearing alignment rings of 20" SPs incorrectly aligned.

(7) Voice Operating.

- (a) Incorrect procedure.
- (b) Poor voice techniques.

✓ (8) NBCD. A poor knowledge of the NBCD organisation has resulted in:-

- ✓ a. Failure to provide reliefs for operators.
- ✓ b. Equipment left uncovered on the Flag Deck and open bridges during fallout and prewetting.
- ✓ c. Communication ratings being the major offenders in failure to wear anti-flash gear or even to have it to hand.

✓ (9) Stowage for Sea. Valuable equipment damaged because of slack and failure to secure for sea.

✓ 155

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(c) Instructions - i OJT

- ii Formal to meet OPS
- iii Formal for Advancement.

(2) Method. The recommended planning sheet is shown at Annex 1D and 1E

b. Long Term Planning

- (1) Objectives. To achieve the bogey figures for the FXTI 13 week period in accordance with the appropriate FXTI on Exercise Directives.
- (2) Method. FXTI FF 10 eighteen week planning grid.

c. Detailed guidance for the above is given at Annexes 2A and 2B.

205. Message Processing Organisation

a. The ships Message Processing Organisation should be tested to capacity before the Work-Up starts.

b. This can be effected in two ways-ie;

- (1) An internal exercise involving a large number of "Drill" messages passing through every stage of the organisation.
- (2) Utilising the Portland "Broadcast Check" exercise details of which are contained in the STWG.

c. The reference for message processing is ACP 121 Annex W.

209. Shakedown and Work-Up Check - Off List

a. To ensure an effective communication organisation the items in paragraph 129 must have been dealt with prior to sailing for Shake-Down.

b. The following are points to be covered during the Shake-Down and if possible prior to Work-Up. If they can be done before this so much the better:-

(1) Equipment and Trials.

- (a) Test main HF transmitters with a Commonwealth Ship/Shore station outside UK.

Programme		AMF		Jux		V I S I T		WEAPON TRIG		LEAVE		PASSAGE TO F.E.		PATROL							
DATE	SERIAL No.	1 <sup>st</sup>	8 <sup>th</sup>	15 <sup>th</sup>	22 <sup>nd</sup>	29 <sup>th</sup>	5 <sup>th</sup>	12 <sup>th</sup>	19 <sup>th</sup>	26 <sup>th</sup>	3 <sup>rd</sup>	10 <sup>th</sup>	17 <sup>th</sup>	24 <sup>th</sup>	31 <sup>st</sup>	7 <sup>th</sup>	14 <sup>th</sup>	21 <sup>st</sup>	23 <sup>rd</sup>	BOOTS	ACTIVE
		MAR	MAR	MAR	MAR	MAR	APR	APR	APR	APR	MAY	MAY	MAY	MAY	MAY	JUN	JUN	JUN	JUN		

## Notes on completing the Fleet Form 10

The Communication Division

References: a. Fleet Exercise and Training Instructions (FXTI)  
Art 103, Annex A, Section 7.

b. Shipa Longcast.

c. RNCP 12, RNCP 15, CB 05011,, AXP3B & JSP2.

1. The Fleet Form 10 (Training Schedule Grid) covers an 18 week training period.
2. The following is completed at the beginning of the 18 week training period:
  - a. Line 1 (Programme) indicated in general terms only from reference b.
  - b. Line 2 (Date) contains the date of the first day of each training week.
  - c. Column 1 (Serial No.) contains only those required to be undertaken by your type of ship (see columns 1 and 6 of reference a.)
  - d. Column 20 (Bogey) contains bogey figures from column 6 of reference a.
  - e. Column 2 through 19 plus number of lines required (Main Grid) contains exercises 'planned' from columns 2, 3, and 4 of reference a., reference b. and c.
3. Initial Planning should be marked out in pencil. Actual exercises carried out then being filled in with pen. The following symbols should be used for completing the Fleet Form 10:

✓ Planned      X Achieved      ⊙ Abandoned      ↗ Postponed

Note. Where more than one exercise is planned or achieved in any one week, the actual number is inserted in the appropriate box, thus 2

4. Report form: Column 21 (Achieved) is to be ticked ✓ for bogeys achieved. Exercises abandoned and any other remarks relevant to the training period are to be appended to the reverse side of the fleet form 10.

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- (b) Test low power HF transmitters with a continental stations.
- (c) Test V/UHF sets with a ship or shore station at ranges greater than 16 miles.
- (d) Test all portables including Stornophones.
- (e) Test FST and A2 with another station.
- (f) MCO RIC Meteorological Area Chart.
- (g) MCO RIC COMPLAN extracts.
- (h) PCS board at DF bay.
- (i) Senior EW rating check RNCP 10 Chapter 3.
- (j) Provision of alternative equipment for the more important nets.
- (k) Provision of ready information as shown in Chapter 1 Annexes 1H to 1M.

(2). Training and Exercises

- (a) Authentication and Numeral Codes.
- (b) Study FXTI and FOTI
- (c) Fleet Form 10.
- (d) Emergency Procedures
- (e) Training for Advancement.
- (f) Enemy Contact Reporting.
- (g) Naval Gunfire Support.
- (h) JOCCOMEX
- (i) NAVCOMEX
- (j) Operation AWKWARD.
- (k) Boarding and Landing parties.
- (l) Board and Tow
- (m) Annex Alfa to the WPP.
- (n) Senior EW rating check RNCP 10 Chapter 3.



- 118 Publications and their storage
- 119 Emergency Destruction.
- 120 Organization of the Communication Division.
- 121 Division and Station Watch - Bill.
- 122. Ships Orders.
- 123
- 124. The Commanding Officers Fund.
- 125. Notice-boards and State-boards
- 126 Safety
- 127
- 128
- 129. Operational Date Check-off List.

### ANNEXES.

- 1A. Sequence of events for new build ships (Milestones)
- 1B List of forms, teleprinter and cryptographic machine stationing stores used by the Communication Division.
- 1C Suggested form for training check-off lists for individual ratings.
- 1D Suggested Training Planning Sheet for programming practical exercises.
- 1E. Suggested Training Planning Sheet for programming training and exercise participation.



- 1F. Compiling the Division Watch and Station Bill.  
Appendix A Compiling the Watchbill Planning Sheet (A)  
Appendix B Compiling the Watchbill Planning Sheet (B)

1G. Suggested headings for the Communications Section of Ship's Orders

1H. Recommended RAS. Cold Stateboard

1I. Recommended. Skeleton Screening Diagram. Stateboard

1J. Recommended Submarine Escorted Stateboard

1K. Recommended OPGEN ALFA Stateboard

1L. SAR Communications Stateboard

1L. Appendix A. Recommended SAR Communications Stateboard

Appendix B Example of completed SAR Communications Stateboard

1M. Submiss - Subsearch - Smashers Communication Stateboard

Appendix A. Recommended Submiss - Subsearch - Smashers  
Communications Stateboard

Appendix B. Example of completed Submiss - Subsearch -  
Smashers Communications Stateboard.

1N. Emergency Destruction Orders.

## CHAPTER TWO

### SHAKE-DOWN AND WORK-UP

- 201 General.
- 202 Managerial points during the work-up.
- 203 Communication training and exercises.
- 204 Planning the training and exercise programme.
- 205 Message Processing Organisation.
- 206
- 207
- 208
- 209 Shake-down and Work-up Check off List
- 210 Common faults observed during work-up.

## ANNEXES

- 2A Exercise Planning Guidance.

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PART ONE

COMMUNICATION MANAGEMENT IN SHIPS

INTRODUCTION

1. The guidance in Part 1 does not attempt to replace instructions in books and orders of a mandatory nature issued by authority. It is essential that senior ratings make themselves conversant with all such publications, including Defence Council Instructions, in order to carry out their tasks effectively.
2. The information given in this part of the book envisages ratings in "charge" positions joining a ship building or in refit, undergoing a "shakedown" period and preparing for a work-up. Consequently the guidance is laid out in the sequence in which the various problems would probably arise.
3. Senior communications ratings are particularly advised that while the chapters which follow highlight the early part of a commission the information in them holds good throughout a ships active life. They must not dispence with this guidance on completion of work-up.

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CHAPTER 1

ACTIVITIES PRIOR TO THE OPERATIONAL DATE

101. Sequence of events.

a. The sequence of events which concern communications ratings is shown at Annex 1A. This is primarily for new construction ships but long refit sequence is similar. The main reference for this subject is BR 2101. "Management Instructions, Ships and craft under construction, repair or refit at Dockyards".

b. The various points in this sequence of events are known as "Milestones".

c. The purpose of the SCO and the ratings-in-charge of each sub-division visiting the URTS, HMS Mercury is to:

- (1) Receive a briefing on the latest modification state of their equipment.
- (2) Team up the proposals for changes to their equipment and lay-out (eg: outstanding A and A's)
- (3) Be briefed on the traffic flow philosophy used in the design of their ship.

102. Complement joining dates.

a. The C.N.D. will normally draft communications ratings to join new construction or long refit ships as follows:

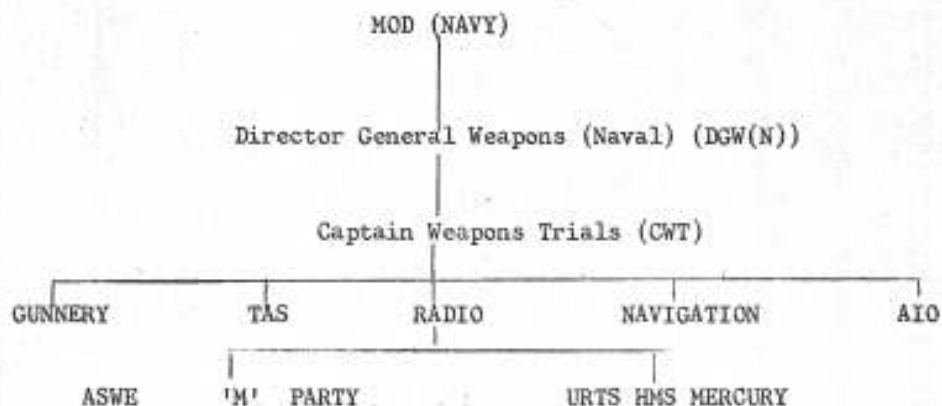
- (1) CRS/RS            6 months prior to commissioning plus 2 LRO(G)/RO(G) and 1 LRO(T)/RO(T).
- (2) CCY/CY            3 months prior to commissioning plus 2 LRO(T)/RO(T) and 1 RO(T).
- (3) CRS/RS(W)        3 months prior to commissioning plus 1 LRO(W)/RO(W).
- (4) Remainder from 3 months prior to commissioning date.

103. Inspections and Trials - General.

a. Communication trials involve all surveillance radars, radio, electronic warfare and visual signalling equipment. The conducting authority is Captain Weapons Trials and the main reference is BR 4050 (2).

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- b. The Inspection and Trial Programming Organisation is:



- c. Normal Inspection and Trials programme sequence is as follows:

<u>TRIAL/INSPECTION</u>	<u>WHEN CONDUCTED</u>
(1) Advance Installation Inspection	Before Installation
(2) Progress Inspection	During Installation
(3) Installation Inspection	o/c Installation
(4) Installation Trial	o/c Installation Inspection
(5) Final Installation Inspection	o/c Final Installation Trial
(6) Harbour Acceptance Trials	o/c Final Installation Trial
(7) Sea Acceptance Trials	o/c HATS
(8) Miscellaneous trials	See para 107

d. Trials (1) to (4) will normally have been completed prior to the senior communications ratings joining. Details of these trials can be obtained from URTS, HMS MERCURY.

e. The senior rating(s) of the sub-specialisation(s) concerned should be in attendance for trials (5) to (8). Ratings detailed to participate in trials must be well briefed.

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104. Final Installation Inspection.

- a. This Inspection includes setting to work, tuning and testing.
- b. Communication ratings as operators are not normally required but the appropriate senior ratings should attend as observers - primarily to take note of any equipment idiosyncrasies.

105. Harbour Acceptance Trials (HATS).

- a. The orders for the conduct of HATS are contained in:
  - (1) Radio communications and associated equipment and VS equipment - BR 4050 (2) Appendix 1 Schedule sheets 1 - 13 (Instructions for conduct of Naval Weapons Inspections and Trials. Vol 2; Acceptance Trials)
  - (2) E.W. Equipment - CB 5027
- b. (T), (G) and (W) ratings are required for these trials.

106. Sea Acceptance Trials (SATS).

- a. The orders for the conduct of SATS are contained in:
  - (1) Radio Communications and associated equipment - BR 4050 (2) Appendix 2; Radar and Radio sections
  - (2) EW Equipment - CB 5007.
- b. The tactical sub-specialisation is not concerned.
- c. (G) and (W) ratings are required for these trials.

107. Miscellaneous Trials

- a. External Communications Trials.- The conduct of ECTs is contained in BR 4050 (2) Appendix 1 Sheet R para 4. ECTs are carried out on equipment not covered by SATS. Trials are carried out by the ships at the first opportunity after successful completion of HATS.
- b. RADHAZ Trials.
  - (1) The orders for the conduct of RADHAZ Trials are contained in BR 4050 (2), Chapter 2 and CB 4986 (Addendum). RADHAZ Trials are conducted by ASWE on new weapons systems and equipment only.



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(2) The Communication division will be required to provide operators When the results of the trial are known liaison with the WEO is required to update RADHAZ orders and the RADHAZ stateboard.

(3) References:- BR 2924, CB 4980 (Addendum), Specification DG ships 282 and Ships Rig Drawings.

c. Jammer Effectiveness Trials - Sec CB 5007

d. Mutual Radio Interference Trials (MRIT)

(1) The orders for the conduct of MRIT are contained in:

- (a) BR 4050 (2) App 2 Sheet R150 - Radio MRIT
- (b) FOTI 0303 - Jammer Mutual Interference Trial
- (c) Current DCIs - Must also be consulted

(2) MRITs require thorough planning and liason. The Senior (G) rating should contact URTS HMS MERCURY at least two weeks before the trial to discuss the MRIT Complan. As MRIT involves the use of all communication and radar equipments from all the remote user positions the operators required will be Communicators RPs UCs, etc. In view of the numbers involved and the complexity of this trial it is recommended that a full scale rehearsal be carried out. Daily Orders and planning sheets should detail the trial and also order that use of outgoing communication facilities should be kept to a minimum.

(e) Radiation Test (TEMPEST).- The orders for the conduct of Radiation Tests are given in CB 04912, CB 04931 and DCI Appendix. On satisfactory completion of a radiation test a "Tempest Cleared" signal is originated in accordance with the current DCI. Should any part of the system fail it is not to be used without permission of CINCFLEET. Ashore test will be carried out at four monthly intervals by ships WE Dept.

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108. Calibrations

a. The equipment requiring calibration and the orders for their conduct is listed below.

<u>EQUIPMENT</u>	<u>EQUIPMENT HANDBOOK</u>	<u>CONDUCT REFERENCE</u>
FH4	BR 1442, 1513 BR 1569, 1935B	BR 2357, BR 4050 APP2 Sheet R40
FH5	BR 2465 (1) & (2)	BR 2357
FM12	BR 1370 and Addm	BR 2357, BR4050 App 2 Sheet R42
FM16	BR 2494	BR 2357, BR 4050 App 2 Sheet R42
FU1	BR 2303 Series	BR 4050 App 2 Sheet R43
UA3	BR 2349	BR 4050 App 2 Sheet R4666
UA13	CB 5001	CB 5027
UA8/9	CB 4885 (2)	BR 2357, CB 5007, CB 5027, BR 4050 App, 2 Sheet R48
UA10	CB 5002	BR 2357, CB 5027, CB 5007
667/668	CB 4881 (2)	CB 5007, CB 5027, BR 4050 App 2 Sheet R56
669	CB05016 (2)	CB 5007, CB 5027

b. Details of external support and communications required at the primary calibration ranges are contained in Fleet Operation Orders Vol 1. The Senior Communication Rating involved in calibrations must be aware of the requirement for each trial. Calibration must be planned well in advance and require liason with the WEO, Navigating Officer and Operations officer during all stages.

c. Briefing of operators is essential at least 24 hours prior to the Calibration

109. Specification Drawings.-

a. Those of concern to the Senior Communication Ratings are listed below. These drawings can be obtained from shipbuilders, Royal Dockyards, ASWE and MOD (N) Overseers.

RESTRICTED

- |                     |   |
|---------------------|---|
| (1) B608/R1         | Installation specification for fitting W/T Transmitter and Receiver aerials.                              |
| (2) B919            | ICS fits in HM Ships.   |
| (3) B1070 and B1071 | ICS 2 fits in HM Ships.   |
| (4) B947            | Installation specification outfit RWA.  |
| (5) B957/R1         | Installation specifications for arrangement of communications and Electronic Warfare offices in HM Ships. |
| (6) B718/R2         | Installation specification for general arrangements for visual signalling equipment in HM Ships.          |

b. The senior communication rating concerned should check with the WEO that, if appropriate, the above are held onboard. If possible the senior (G) rating should arrange to hold B608/R1.

110. Stores

a. The following publications will assist the Senior Communication Ratings to check that their Naval Stores allowance is correct:-

- |             |   |
|-------------|---|
| (1) BR4     | - Naval Storekeeping Manual                             |
| (2) BR96    | - Stores Accounting Instructions                        |
| (3) BR320   | - General Instructions, Naval Stores                    |
| (4) BR756   | - Navy Depot, Instructions for Stationary Supplies etc. |
| (5) RNCP 13 | - Quartz Crystals for Communications & Allied Services. |

b. Allowance Lists.- Individual ships allowances are listed in the reference below. Initial stores allowances are issued direct to the sub-division and a permanent loan list (S1099) raised. The Senior Communication Ratings are to check against allowance lists that their complement of stores are correct. Stationary allowances consists of 6 monthly supply and on receipt a further 6 months supply should be demanded.

- |          |                         |
|----------|-------------------------|
| (1) S132 | - General Naval Stores. |
|----------|-------------------------|

RESTRICTED

- (2) S1310B - Stationary
- (3) D1206 - Technical Stores
- (4) BR756 - Office Machinery

c. Ensure good liaison with the Supply Department for the stowage of bulky items - eg: Flags Ensigns, Teleprinter Rolls) and also to ensure that an adequate stock of heavy use stores (eg: Teleprinter rolls and aerial wire) is maintained.

d. Stores Record.- A record of all demands raised should be kept.  
Recommended headings:-

<u>Patt. No.</u>	<u>Description</u>	<u>Quantity.</u>	<u>Date of Demand.</u>	<u>Demand Note No.</u>	<u>Signature.</u>
------------------	--------------------	------------------	------------------------	------------------------	-------------------

Maintaining such a record will ensure regular turnover of requirements and easy tracer action.

e. Ready use stores should be kept adjacent to equipment where possible.

f. List of Forms for use by the Communications Division.- A list of forms supplied to the Communications Division is at Annexe 1B.

g. DO NOT BECOME A SUB-NAVAL STORES. If other departments and divisions make out good cases for permanently holding equipment which by convention is normally held by the communications divisions arrangements should be made for them to draw them from the supply Department. Such items are, for example, boats ensigns, portables and visual signalling equipment held by the Boats Officer for the sea-boat.

#### 111. Crystals

a. Check crystal allowance against RNCP 13 and make demands accordingly. Crystals for PTR 170 (ARI 18197) are particularly important and crystals for EW equipment are sometimes overlooked.

b. Ship-Shore and emergency frequency crystals should be in - situ in the appropriate equipment. A custom-built cupboard or sets of drawers is recommended for the remainder. The senior (G) rating should keep a separate account of his crystal bank taking instant action to replace faulty crystals.

#### 112. Portables

a. Portable radio equipment allowance is to be checked against the current DCI. This Instruction also gives useful data on all portables in use in the RN as does JSP2

b. Individual portables must be checked against "E" lists before being accepted for operational use.

RESTRICTED

c. Check that type 634 (A43) have marked on them the frequencies of the six channels and remember that by connecting one to a fitted UHF aerial they can be used during power failures. The type 635 can also be used in this respect.

d. The senior (G) and (T) rating must maintain good liason with the WEO for the changing of batteries and their ready0use stowage when not in use.

113. VS Equipment

a. Details of allowance for ready reference by the senior (T) rating are contained in an Annex to Part 2 of this book.

114. Training - General

a. This and subsequent paragraphs deals with the setting up of a communication and EW training organisation and envisages activities, within the ship, being confined within the Communication Division. The broader aspects of training and participation in exercises are dealt with in Chapter 2. It is appreciated, however, that the two will probably overlap and they should therefore be read in conjunction.

b. Training is of vital importance throughout a mans career. The senior communication ratings should start a training programme, however simple and however few there are to undertake it, at the first opportunity. To rationalise effort and to follow a consistent policy it is recommended that one senior rating co-ordinate all communication and EW training within the division.

c. The initial aims should be:

- (1) Completion of PCT/PJT by appropriate ratings prior to commencement of the Work-Up.
- (2) Attainment of the appropriate Operational Performance Standards by completion of the Work-Up.

d. Training for advancement must not be ignored particularly for the RO3 due by time for advancement to RO2. However at this stage of the commission the importance of this, generally, is out-weighed by the need to plan for b (2) above. Opportunity should be taken at using the facilities of HMS Mercury and Signal Training Centres for those ratings due for examinations and advancement.

e. A record of training progress must be maintained for individual ratings in order to identify steps in progression towards meeting Operational Performance Standards. A suggested format is at Annex 10. Junior ratings must be kept informed of their progress in this report

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f. It is planned that at some future date training task books will be available to facilitate recording of training progress.

115. Attainment of Operational Performance Standards (OPS)

a. Details of the OPS for all communication ratings are given in RNCP 15. Also contained in this book are the Training Performance Standards (TPS) of ratings who have completed their training at HMS Mercury.

b. The task of those primarily concerned with training is to draw up a programme whose aim is for all ratings to achieve their OPS, which is a measureable performance, in an operational environment - ie - On - the - Job. For those from HMS Mercury it consists of bridging the gap between TPS and OPS by On - the - Job - Training (OJT); for others by PCT/PJT followed by OJT to bring them back to their OPS.

c. Advice on how to conduct OJT is given in RNCP 15.

d. Senior ratings may find that JROs and RO3s join several months before the end of a refit. In these circumstances, where OJT facilities are very limited, consideration should be given to loan drafting them to operational ships.

116. Pre-Commissioning and Pre-joining Training.

a. PCT/PJT courses fall into two categories; those detailed by the CND and those available on request. The senior communication ratings should take advantage of available courses; both for junior and senior rates.

b. Recommended courses are listed below. Details are given in the appropriate DCIs which must be studied before applications are made.

<u>Course</u>	<u>Venue</u>	<u>Notes</u>
(1) Professional	As in DCI	(a)
(2) Security	ATURN POOLE	
(3) Management	RNB Portsmouth	
(4) Divisional	RNB, Portsmouth	
(5) Fire fighting and NBCD	HMS Phoenix	
(6) Ship husbandry	HMS Sultan	



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Notes:

- a. CND does not detail ratings for Naval Gunfire Support courses. Application for at least 2 RO(G) to attend this course should be made direct to ATURN POOLE in accordance with the DCI.

117. Publications and forms associated with communication training management

- a. All senior rates and others concerned with training must be aware of the uses of the following:

<u>Publication/Form</u>	<u>Contains details of</u>
(1) RNCP 15	<ol style="list-style-type: none"> <li>(a) Courses available at HMS Mercury and STC</li> <li>(b) OJT including Programmed Tests available.</li> <li>(c) Practical exercises to be carried out.</li> </ol>
(2) Current DCI	<ol style="list-style-type: none"> <li>(a) Details of PCT/PJT</li> <li>(b) Dates of communication refresher courses.</li> </ol>
(3) BR 1066	<ol style="list-style-type: none"> <li>(a) Requirements for advancement.</li> </ol>
(4) 'S' 1308 series	<ol style="list-style-type: none"> <li>(a) When completed training carried out (See Annex 1B)</li> </ol>
(5) RNCP 10	<ol style="list-style-type: none"> <li>(a) EW in tactical exercises.</li> </ol>
(6) CB 05011 (B)	<ol style="list-style-type: none"> <li>(a) Radar recognition exercises</li> </ol>

- b. A suggested Practical Exercise Planning Sheet and Exercise and Training Planning Sheet are at Annex 1D and 1E.

118. Publication and their stowage

- a. Maintain a good liason with the CBO from the start giving good notice of the books you require and by when you require them.
- b. Standard reference which you should refer to are:

RESTRICTED

<u>Publication</u>	<u>Contains</u>
(1) BRN 01/1	Outfit of communication, EW and cryptographic publication to be held.
(2) CBI	Outfit of CBs to be held.
(3) BR1	List of BRs
(4) ACP 122	Basic security instructions
(5) AMSP 293	Stowage Instructions
(6) BR 4005	General security instructions
(7) Captains Standing Orders	Ships Security Orders

c. FLCOs and similar "command" publication, which the CBO may omit to refer to, also lists books you are to hold over and above your normal outfit

d. Take the planned siting of notice and stateboards into account when proposing the siting of safes and steel cupboards. See paragraph 125 b.

e. GET YOUR STAFF SECURITY CONSCIOUS FROM THE OUTSET. IT COULD WELL SAVE SERIOUS EMBARRASSMENT IN THE FUTURE.

119. Emergency Destruction

a. The Emergency Destruction orders for the ship are normally written by the Security Officer. However, he will probably consult the senior communication ratings on certain aspects, particularly concerning interpretation of AMSP 293 and sequence of destruction of cryptographic material.

b. Suggested orders for emergency destruction are shown at Annex 1N. It is recommended that these orders, when suitably changed to suit individual ships organisations, be pasted on the inside lid of the safes concerned and written in the MCO Turn Over Book.

120. Organisation of the Communication Division

a. The fundamental regulations for administering the Communication Division are QRRN. The ship Management System is an elaboration of these regulations consisting of a package of ideas and techniques aimed to improve the utilisation of manpower. The system is designed to assist Officers and Senior Rates to run their ships with simplicity, efficiency and economy by the elimination

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of the waste of men's time and effort caused by indifferent organisation, planning and communication.

b. Full details for the management of a ship are contained in "Practical Management in ships (1973)" issued by Commander-in-Chief Fleet. Two of the more important facets for the Senior Communication Ratings are getting the priorities right and the delegation of tasks.

c. Of prime importance and to be effected at the earliest possible stage in the commission is a good liason between the ratings in charge of each sub-division

121. Division and Station Watchbill

a. Detailed instructions on the compiling of the Divisional/Sub-Divisional and stations watch-bill are contained in Annex 1F. A suggested watch-bill planning sheet is also shown at Annex 1F.

b. The following should be borne in mind when compiling a form S 1309b

(1) Shelter Stations

(a) Watches to be rotated to take into account maximum time permitted outside the citadel during fall-out.

(2) Action Stations

(a) Operators on watch should remain at their positions opposite watches closing up in other positions as ordered.

(3) Life-Raft Stations

(a) Responsibility for provision of portables.

122. Ships Orders

a. The recommended format for compiling Ships Orders is contained in Practical Management in Ships (1973). Suggested headings for the communication division section are shown in Annex 1G.

124. The Commanding Officer Fund

a. In accordance with QRRN and 1950 the Commanding Officer has a small fund available to use for items which will improve the lighting efficiency of the

ship.

- as: b. The senior ratings should bear this in mind for, example, such times
- (1) A crystal box/cupboard
  - (2) Stateboards (see paragraph 125)
  - (3) Watertight portables stowage for liferaft portable.

#### 125. Notice-boards and Stateboards

a. Details of standard fixed notice-boards and state-boards are contained in ASWE specification B957/R1:

- (1) Noticeboards - Chap 4 Art 21
- (2) EW Stateboards - Chap 4 Art 22
- (3) Radio communication - Chap 4 Art 23  
Stateboards
- (4) Siting - Chap 4 Art 25 (includes details of the  
Fleet Formation Board)

Note: Chapter 4 of the ASWE specification also gives details of the EW Stateboard. However, this is obsolescent and details should be obtained from RNCP 10 (see c below).

- b. (4) above should take the siting of safes into account.

c. The following are required but details are not yet listed in the ASWE specification referred to above:

<u>Stateboard</u>	<u>Details</u>
(1) EW Tasking	RNCP 10
(2) EMCON	ACP 178 NATO SUPP 1

d. Portable state-boards listed below are suggested for use, either within the Division or when the (T) sub-divisions are tasked with keeping tactical and similar information up to date during an operation. In most cases these are recommended formats only. The forms should be placed between two sheets of perspex unless a more suitable means of display is appropriate;

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<u>Stateboard</u>	<u>Details</u>
(1) Manoeuvring Form	Form S 376
(2) RAS Gold	Annex 1H
(3) Skeleton Screen	Annex 1I
(4) Submarine Exercise State	Annex 1J
(5) OPGEN Alfa	Annex 1K
(6) SAR Communications	Annex 1L
(7) Submiss - Subsunk - Smashex Communications	Annex 1M

e. Equipment stateboards should indicate equipment under maintenance or defective.

126. Safety

a. Immediate action and an automatic regard for safety precaution are very important when dealing with communications equipment. Too often, however precautions recommended to prevent accident or damage are overlooked when using equipment.

b. It must be emphasised to all ratings, but particularly those living in a ship for the first time, the danger inherent in:

- (1) Working with high voltage power supplies
- (2) The effects of radiation in the vicinity of aerials and aerial leads - to personnel, fuel and explosives.
- (3) The risk of fire.
- (4) Working aloft

c. The publication reference for safety are:

- (1) BR 4007 - Ship Firefighting Manual.
- (2) BR 25 - - First Aid Handbook.
- (3) BR 2924 - Radio Hazards in Naval Service.

d. A "safety" check off list is contained in paragraph 129.

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*SOOT TRAINING*  
129. Operational Date Check-Off List.

a. The following should have been dealt with or in hand before the ship becomes operational, preferably, if possible, before commissioning. They are not, necessarily, in sequence;

(1) Equipment and Trials.

- ~~(a)~~ Equipment brief at URTS, HMS Mercury.
- ~~(b)~~ External communications trials (ECTs).
- ✓ (c) Harbour acceptance trials (HATs).
- ✓ (d) Sea acceptance trials (SATs)
- ✓ (e) Aerials correctly rigged.
- (f) Dressing Lines correctly rigged.
- ✓ (g) Calibrations completed and calibration curves held
- ✓ (h) MRIT completed.
- ✓ (i) RADHAZ trials.
- ✓ (j) Radiation trials.
- ~~(k)~~ Jammer effectiveness trials.
- (l) All remote positions checked.
- ✓ (m) Emergency power supplies tested using relevant equipment.
- ✓ (n) Polar diagrams held.
- (o) COMAL carried out.
- (p) Portables complete and tested.
- (q) Transmitter settings log started.
- (r) Canvas covers for signalling projectors held.
- (s) Canvas bags for dressing lines.
- (t) Dress ship organisation tested.
- (u) Check UA3 in good working order-with particular attention to pulse blanking.
- (v) Ready lights tested.
- (w) Recognition box; switch and dimmer.



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- (x) Emergency NUC lights.
- (y) Damage control lights.
- (z) Headsticks is all Jacks and Ensigns.
- ✓ (aa) Defect books raised and effective defect reporting organisation arranged.
- (ab) Battery stowage and re-charging.
- ✓ (ac) Correct complement of stateboards.
- (ad) Bridge and Screen cards.
- ✓ (ae) Correct siting of stateboards and notice-boards.

(2) Stores.

- ✓ (a) Correct naval stores allowance.
- ✓ (b) Correct outfit of <sup>SA</sup> BRs and other books issued by the Supply Department.
- ✓ (c) Correct stationary allowance
- ✓ (d) Correct office machinery allowance.
- (e) Correct crystal allowance.
- (f) Correct allowance of Foreign Ensigns.
- ✓ (g) Suitable Ready-Use stowages.
- ✓ (h) Adequate proportions of Ready-Use stores.
- ✓ (i) Stores demand record.
- ✓ (j) Adequate supply of naval store forms.
- ✓ (k) Delegations of responsibility for care and custody of all or certain naval items
- (l) "E" lists for portables held or readily available.

(3) Training.

- ✓ (a) Senior <sup>SW</sup> communication ratings completed PJTs *EQUIP TRAINING*
- ✓ (b) Junior <sup>SW</sup> communication ratings completed PJTs. " "
- ✗ (c) At least two RO(G) completed NGS PJT.

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- ✓ (d) Ship familiarity training for ratings at sea for the first time.
- ✓ (e) Training and exercise programme drawn up.
- ✗ (f) OJT to meet OPS and for advancement.
- ✓ (g) Training Records.
- ✓ (h) Training tapes (EW).
- ✓ (i) Change round duties of junior communication ratings to give breadth of training.
- ✓ (j) Keeping an operators log.
- ✗ (k) Senior EW rating check.

(4) Security and Publications.

- ✓ (a) Read the security section of the Captains Standing Orders.
- ✓ (b) Correct outfit of all publications other than those obtained from naval stores.
- ✓ (c) Publications in good condition.
- ✓ (d) Changes and amendments in date.
- ✓ (e) Correct stowage for publications.
- ✓ (f) Weighted muster boards.
- ✓ (g) Covers for classified machines.
- ✓ (h) Publications stowages correctly marked.
- ✓ (i) Corrections register started.
- ✓ (j) Local corrections entered.
- ✓ (k) Visitors book available.
- ✓ (l) Warning notices on compartment doors.
- ✓ (m) Security of compartments.
- ✓ (n) Adequate confidential waste containers.
- ✓ (o) Routine classified waste destruction.
- ✓ (p) Emergency destruction.
- ✓ (q) Extra copies of books for special purposes.

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- ~~(r)~~ Special NATO and other treaty organisation publications.
- ~~(s)~~ Senior EW rating check RNCP 10 Chapter 9.

(5) Message Processing.

- (a) Design intended message flow path.
- (b) "S" forms.
- (c) Hand message organisation.
- (d) Specimen signatures of Releasing Officer.
- (e) RNCP 9 read by all officers.
- (f) Correct files and file stowage.
- (g) General message register.
- (h) Standard message distributions.
- (i) Rush and special distribution methods for particular types of signals.
- (j) Confidential and above distribution register.

(6) Administration.

- ✓ (a) Watchbill.
- ✓ (b) Junior rates accommodation.
- ✓ (c) <sup>EW</sup> Communication aspects of Captains Standing Orders.
- ✓ (d) <sup>EW</sup> Communication section of Ships Standing Orders.
- ✓ (e) War Orders.
- ✓ (f) Individual tasks; authority accountability listed.
- ✓ (g) Divisional officer and senior rate organisation.
- (h) Planning meetings.
- (i) Planning sheets.
- ✓ (j) Liaison with WE and Operations department.
- ✓ (k) Liaison with co-ordination of other departments.
- (l) Senior EW rating check RNCP 10 Chapter 8.

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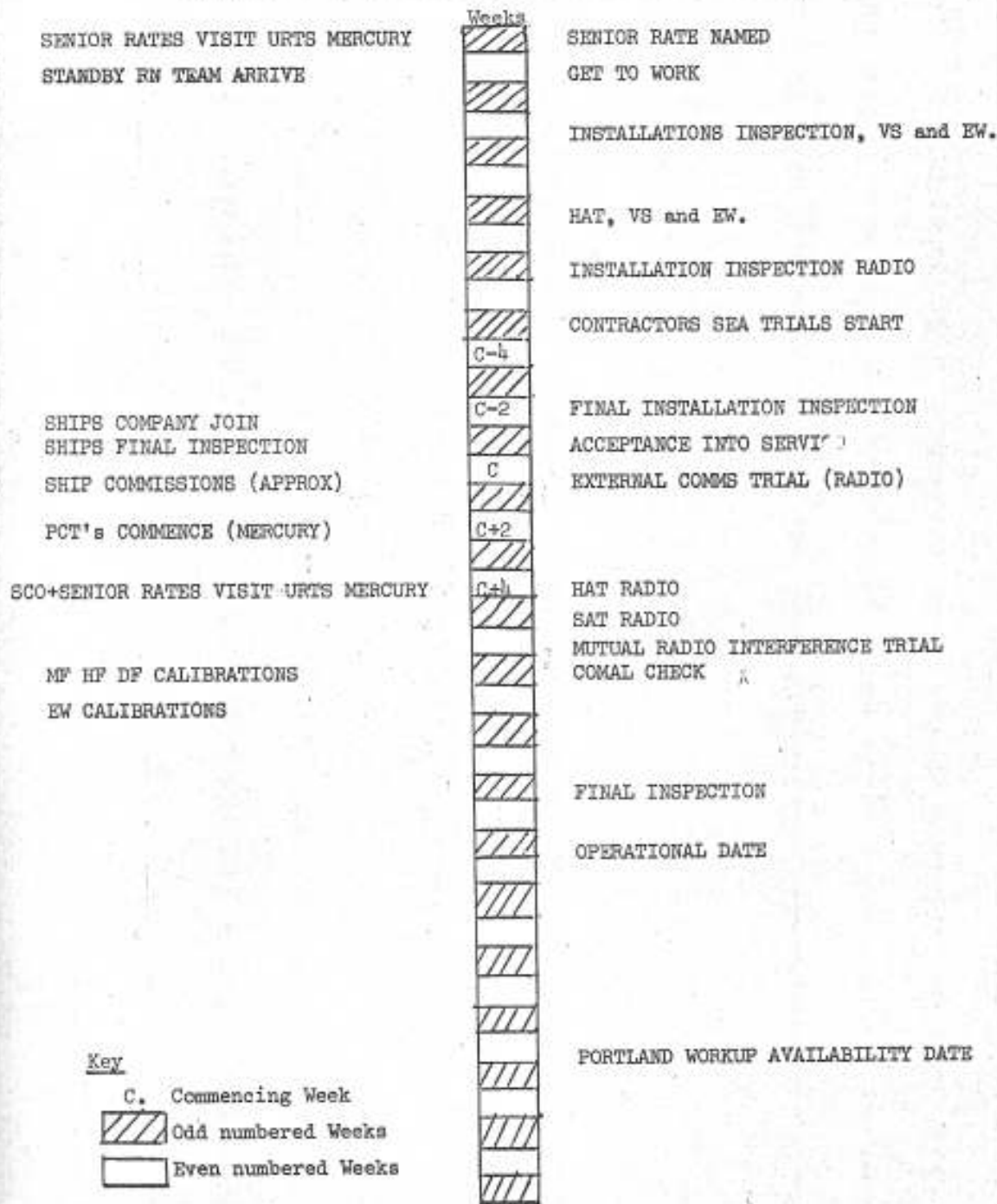
(7) Security.

- ✓ (a) RADHAZ; markings; briefings; board; orders.
- ✓ (b) Safety and First Aid notices.
- ✓ (c) Electrical precautions and safeguards.
- ✓ (d) Safety harnesses (Pattern No 0476-924-4591)
- ✓ (e) Treatment for shock and burns.
- ✓ (f) Procedure in the event of fire.

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ANNEX 1A

SEQUENCE OF EVENTS FOR NEW BUILD SHIPS (MILESTONES)



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ANNEX 1B

LIST OF FORMS, TELEPRINTER AND CRYPTOGRAPHIC MACHINE,  
STATIONARY STORES USED BY THE COMMUNICATION DIVISION.

1. CERTIFICATES

S.431 Trade Certificate-Electronic Warfare.  
S.1246d Trade Certificate-Tactical.  
S.1246e Trade Certificate-Radio.

2. EXAMINATIONS

S.442 Application for Advancement Examination.  
S.1124 Return of Communication Ratings Examined.  
S.1303a Recommendation to Qualify Professionally for Higher Ratings.

3. F/SIGS SERIES

F/SIGS224 Out/Refile Record.  
F/SIGS225 Route Chit.  
F/SIGS226 Crypto Route Chit.  
F/SIGS227 In Record.  
F/SIGS228 Disposal and Receipt Form.  
F/SIGS229 Tributary Transmit Log.  
F/SIGS230 Tributary Receive Log.  
F/SIGS231 Message Withdrawal Slip.  
F/SIGS232 Tape Relay Centre Receiving Log.  
F/SIGS233 Tape Relay Centre Transmit Log.  
F/SIGS234 Tape Copy Log.  
F/SIGS243 Tape Relay Centre Transmit Log Sheet.  
F/SIGS244 Tape Relay Centre Receive Log Sheet.

4. HISTORY SHEETS

S.1246h History Sheet-Communication Ratings.

5. LOGS

S.1320c Signal Log.  
S.1647 Type 667/8 Log.  
S.1648 Jammed Victims Log.  
S.1649 EW Intercept and Reporting Form.  
B/SIGS.1 W/T Operators Log.



RESTRICTED

Annex 1B.

6. MESSAGES

F/SIGS266 Signal Message Form.  
 F/SIGS266 Hecto Master Originators Form.  
 (SPIRIT)  
 S.1320 Naval Message Form White Unclassified.  
 S.1320a Naval Message Form White Classified.  
 S.1326 Private Message Form.  
 S.1555 Signal Message Drafting-Desk Reminder

7. MISCELLANEOUS

S.279 Caution Notice for Display Outside Doors of Crypto Offices.  
 S.1306 Repair and Maintenance Record for Crypto Machines.  
 S.1588 Communications Poster.  
 S.1562 Turnover Information.  
 S.1563 Call Sign Description Card.  
 S.1564 Warship Route Card.

8. MUSTERS

S.1325 Muster of Registered Communication Publications.

9. RETURNS

S.1308 Communication Branch Training Records (Binder).  
 S.1308a Inspection of Training Records.  
 S.1308b Communication Watchbill.  
 S.1308c Record of Communication Practical Exercises.  
 S.1308d Record of Communication Training.

10. TELEPRINTER and CRYPTOGRAPHIC MACHINE STATIONARY STORES

PATT 0574/29258 Ribbon for Cypher Machines.  
 PATT 0574/901-0462 Tape Gummed for Cypher Machines.  
 PATT 0575/901-3392 Teleprinter Rolls (Single Ply).  
 PATT 0575/24922 or 901-0802 Teleprinter Rolls (Two Ply).  
 PATT 0575/24923 or 901-0802 Teleprinter Rolls (Three Ply).  
 PATT 0575/24924 or 901-0803 Teleprinter Rolls (Four Ply).  
 PATT 0575/163304 Teleprinter Rolls (Banda Type D Multi-Ply)  
 Purple Ormig, and Black Carbon on Reverse.  
 PATT 0575/163321 Teleprinter Rolls (Banda Type C Multi-Ply)  
 Black Ormig Only.

NOTES

1. PATTS. 0575/24922 to 24924 are conventionally wound for No. 12 teleprinters.
2. PATTS. 0575/901-801 to 901-0803 are reverse wound for NO.7B teleprinters
3. PATTS. 05753163304 and 163321 are supplied only to frigates and above, RN Air Stations and communication centres ashore.

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ANNEX 1CSUGGESTED FORM FOR TRAINING CHECK-OFF LIST  
FOR INDIVIDUAL RATINGS

NAME.....

RATING.....

SENIORITY.....

Training Tasks (examples).	Training Carried out; (see Note)						
	1st	2nd	3rd	4th	5th	6th	Final
Type 640, Programmed Test.							
Type 640, Set up, tune and remote.							
Type 692, Tune and Remote.							
RFS, Set up and test							
Emergency aerial AJE - connecting.							
Emergency diesel - start up put on load.							
NAVCOMEX 402.							
Type 634 Set up and use.							

- NOTES. 1. The columns headed 1st to Final show the dates when training was carried out. The "Final" date being the date training was successfully completed.
2. The need to complete the 2nd to 5th columns will depend on the ability of the rating concerned and/or the complexity of the subject.

## RESTRICTED

## ANNEX 1D

SUGGESTED TRAINING PLANNING SHEETS FOR PROGRAMMING PRACTICAL EXERCISES

1. These planning sheets should be compiled for the practical exercises shown in RNCP 15 chapter 6. They indicate the number of exercises to be completed by the staff for the whole week.

2. The duration for the FRX shows the total time a man is involved for one exercise: i.e. 15 minutes reading and 15 minutes writing down.

<u>PRACTICAL EXERCISE PLANNING SHEET.</u>					
<u>WEEK COMMENCING</u>					
TYPES OF PRACTICAL EXERCISE	DURATION of EXERCISE	NUMBER OF MEN INVOLVED			
		"G"	"T"	"W"	"ALL"
M.M.X.	30 MINS	7	-	-	---
F.R.X.	30 MINS	-	6	-	--
F.T.X.	10 MINS	-	6	-	--
R.R.X.	30 MINS	-	-	8	---
T.T.X.	15 MINS	-	-	-	10
T.P.X.	15 MINS	-	-	-	11

## RESTRICTED

## ANNEX 1E

SUGGESTED TRAINING SHEET FOR PROGRAMMING TRAINING  
AND EXERCISE PARTICIPATION

1. These planning sheets show all exercise and training activities for the entire staff allocated both daily and weekly.

Communication Division Training and Exercise Planning Sheet Week Commencing.....				
DAY/DATE	TYPE of EXERCISE/TRAINING	PARTICIPANTS	SUPERVISOR	DURATION
MONDAY	TTX	3T	LRO(T)	15 MINS
	TPX	3G	LRO(T)	15 MINS
	RRX	4W	LRO(W)PINK	30 MINS
	JOCOMEX 5	G RATING ON WATCH	LRO(G)	24 HOURS
	NAVCOMEX 405	3T	LRO(T)	60 MINS
	PROVISIONAL EXAM TRAINING	2T-2G-2W	CY/RS/RS(W)	60 MINS
TUESDAY	TTX	3G	LRO(W)PINK	15 MINS
	TPX	3T	LRO(W)PINK	15 MINS
	FRX	2T	LRO(T)	30 MINS
	RRX	4W	LROW GREEN	30 MINS
	NAVCOMEX 405	3G	LRO(G)	60 MINS
	NATO SHIP SHORE (FLC01)	'G' RATING ON WATCH	R.S.	AS REQD
WEDS	TTX	3W	LRO(G)	15 MINS
	TPX	2W	LRO(G)	15 MINS
	MMX	3G	RS	30 MINS
	FTX	3T	CY	3x10 MINS
	O.J.T.	2T-2G-3W	RO1(G/T/W)	60 MINS
THURSDAY	TTX	3W	LRO(W)PINK	15 MINS
	TPX	1 G	LROW GREEN	15 MINS
	FRX	4T	CY	30 MINS
	MMX	4G	LRO(G)	30 MINS
	EWX 22	4W	LROW GREEN	60 MINS
	PROVISIONAL EXAM TRAINING	2T-2G-2W	CY/RS/RS(W)	60 MINS
FRIDAY	FTX	3T	LRO(T)	3x10 mins
	SPARE FOR PRACTICALS IF REQUIRED	6T-7G-8W (as required)	LROT/G/W (as reqd)	30 MINS

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ANNEX 1F

COMPILING THE DIVISION WATCH AND STATION BILL

1. Watches

a. Three factors decide the number of watches that the division will work at any time:-

- (1) The Operational Requirement.
- (2) The Complement of the Division.
- (3) The Ships Policy.

b. When the three factors above have been satisfied, the aim should be to employ the least number of men on watch at any time.

2. Presentation

a. The Watchbill should be presented in such a way that any possible eventuality during the commission can be readily covered by it. Form S1308b is to be used.

3. Watchkeeping System

a. The Watchbill planning sheet shows the 2/4 and 3/6 systems. Changes from one system to the other cannot be achieved without some acceptable inconvenience.

4. Watchbill Planning Sheet

a. To complete the watchbill consider each sub-division separately. Sub-divisional liaison is necessary to ensure balanced watches. e.g.

- (1) Select ratings from the 'G' sub division and satisfy the 6 watch system (if impossible, then satisfy the 4 watch system). Example shown at Appendix A.
- (2) Select ratings from the 'T' and 'W' sub divisions in the same manner.

b. An example of a completed planning sheet is shown at Appendix B. When the optimum watchbill has been produced details should be transferred to form S1308b.

# ANNEX 1F

## APPENDIX A

### COMPILING THE WATCHRILL PLANNING SHEET (A)

3 WATCHES	6 WATCHES	2 WATCHES	4 WATCHES	RATINGS BORNE
RED	FIRST	PORT	FIRST	RO1(G) SMITH
	SECOND		DAYMAN	
				JO1(G) JONES
WHITE	FIRST	STARBOARD	SECOND	RO2(G) ABEL
	SECOND		FIRST	RO3(G) GREEN
BLUE	FIRST	STARBOARD	DAYMAN	RO2(G) BROWN
	SECOND		SECOND	
				RO2(G) CLARK



APPENDIX B

COMPILING THE WATCHBILL PLANNING SHEET (B)

3 WATCHES	6 WATCHES	2 WATCHES	4 WATCHES	RATINGS BORNE
RED	FIRST	PORT	FIRST	LRO(W) ALLEN RO1(G) SMITH RO2(T) ATKINS RO3(W) LYON
	SECOND		DAYMAN	CRS/RS(W) TAYLOR JRO(G) JONES RMRO BIGG RO2(W) J. EVANS
	FIRST		SECOND	CRS/RS FEAT LRO(T) BRUN RO2(G) ABEL JRO(W) HOWARD RO2(T) BRIGHT
	SECOND		FIRST	LRO(W) BLACK RO3(G) GREEN RO2(W) BRAND JRO(T) LEAN
WHITE	FIRST	STBD	DAYMAN	CCY/LY ROBERTS RO2(G) BROWN RO1(T) JENKINS RO1(W) BIGGLES
	SECOND		SECOND	LRO(G) GERMAN RO2(G) CLARK RO3(T) TRUITT JRO(W) ALLEN

ANNEX 16.

SUGGESTED HEADINGS FOR <sup>The</sup> COMMUNICATIONS SECTION OF SHIP'S ORDERS

CHAPTER 1 - GENERAL

1. DRESS FOR DUTYMEN
2. SMOKING
3. CEREMONIAL
4. DELAYS IN CLEARING MESSAGES
5. SERVICE AND PROCEDURE MESSAGES
6. DEFECTS
7. TURNOVER LOGS
8. TIME CHECKS
9. RECORDS AND RETURNS
10. FLYING STATIONS
11. SEABOAT
12. OPERATION AMKWARD
13. LANDING PARTY
14. BOARDING PARTIES
15. NBCD

CHAPTER 2 - TACTICAL SUB-DIVISION

1. SIGNAL DECK WATCH
2. SIGNAL PROJECTORS
3. THE BRIDGE SAFE
4. TELESCOPES AND BINOCULARS
5. EMERGENCY ARRANGEMENTS -
6. POST ACTION SIGNALLING
7. COMMUNICATIONS WITH MERCHANT VESSELS
8. RECOGNITION
9. LIAISON WITH MCO AND EWO

### CHAPTER 3 - GENERAL SUB-DIVISION

1. TACTICAL COMMUNICATIONS
2. CRYPTOGRAPHY
3. READINESS OF EQUIPMENT
4. EMERGENCY ARRANGEMENTS
5. PORTABLE RADIO EQUIPMENT
6. DISTRESS ORGANISATION

### CHAPTER 4 - WARFARE SUB-DIVISION

1. INTERNAL PROMULGATION OF ELECTRONIC EMISSION POLICY
2. REPORTING INTERCEPTS
3. INTERCEPT LOG
4. TYPE 668 AERIALS (AYO)

### CHAPTER 5 - MESSAGE PROCESSING

1. GENERAL
2. OFFICERS AUTHORISED TO RELEASE SIGNALS
3. OUT TRAFFIC - GENERAL
4. IN TRAFFIC
5. OUT TRAFFIC - NOT REQUIRING OFF-LINE ENCRYPTION
6. OUT TRAFFIC - REQUIRING OFF-LINE ENCRYPTION
7. REFILE TRAFFIC
8. HAND MESSAGES
9. MESSAGES HANDLED AT POSITIONS OUTSIDE THE MCO
10. SPECIAL HANDLING INSTRUCTIONS
11. MESSAGE FILES
12. SERVICE TELEGRAMS
13. PRIVATE TELEGRAMS

## CHAPTER 6 - SIGNAL MESSAGE DISTRIBUTION

1. GENERAL
2. ACTION OFFICERS
3. RUSH DISTRIBUTION
4. OPERATIONAL DISTRIBUTION
5. WELFARE MESSAGES
6. AIRMOVE MESSAGES
7. ENEMY REPORTS
8. DISTRIBUTION GUIDE

## CHAPTER 7 - TELEPHONE EXCHANGE (NOTE: IF COMMS DIVISION ACCOUNTABLE)

1. RESPONSIBILITY AND MANNING
2. INCOMING CALLS
3. OUTGOING CALLS
4. DEFECTS

## CHAPTER 8 - RADIO HAZARDS

1. GENERAL
2. TYPES OF HAZARD
3. MAN ALOFT
4. FOREMAST EXCITATION
5. ANF WHIP EXCITATION
6. RESPONSIBILITY AND ORGANISATION
7. ACTIVITIES SUBJECT TO RADIO HAZARD
8. RADHAZ PRECAUTIONS REQUIRED IN OWN SHIP
9. RADHAZ PRECAUTIONS IN ADJACENT SHIPS

NOTE: Dependent on ship the 'Task Descriptions' for SCO, Senior Communication Rating etc (See Practical Management in Ships) can be included in communications section.

# RAS COLD STATEBOARD

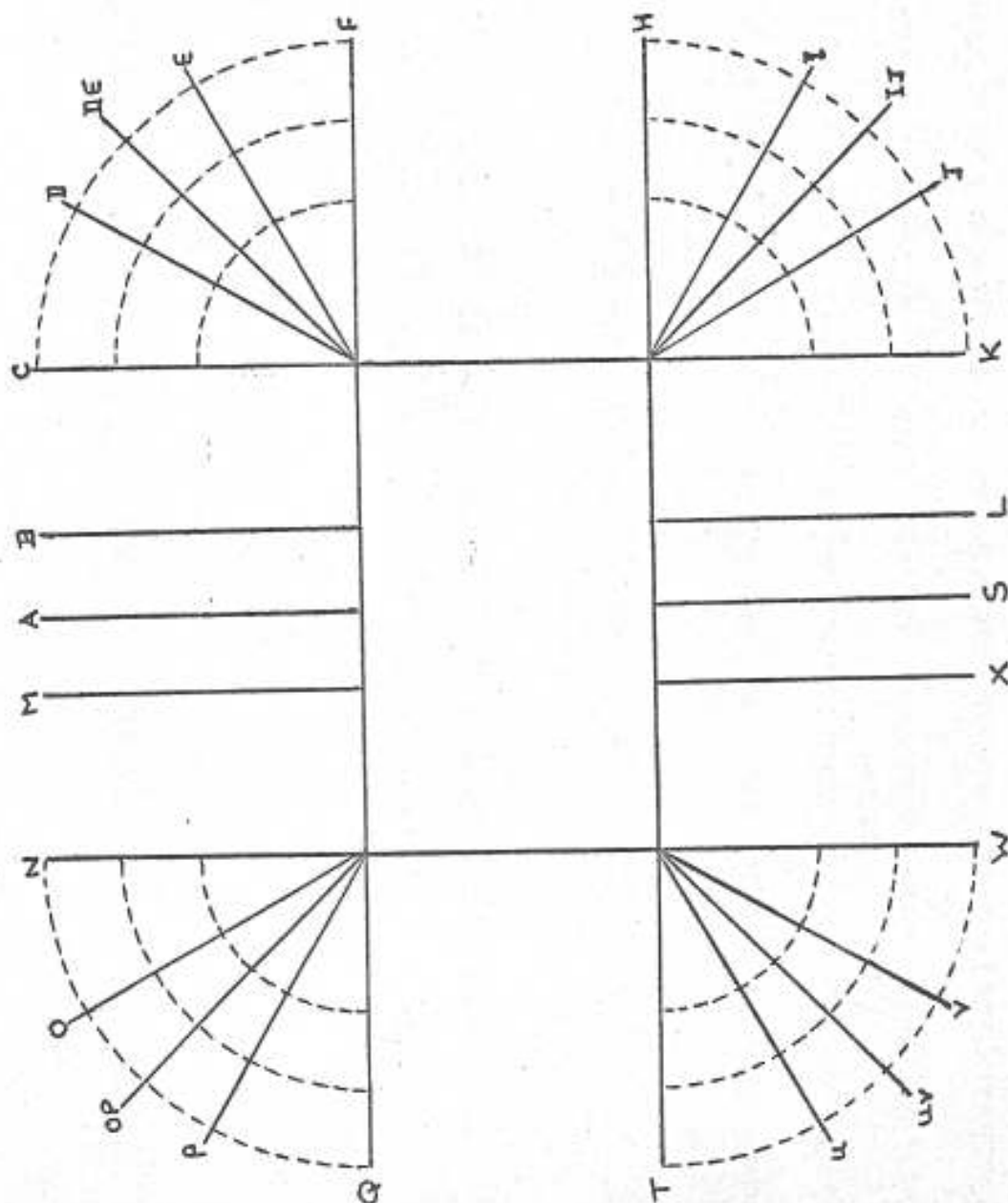
Notes: Each Time Designator Represents 20 Minutes.

RAS COLD STATEBOARD									
C		R/V TIME		R/V POSITION		D		COURSE	
E		URG FORMATION				P		ORDER OF R.A.S.	
TIME		SUPPORT SHIP				SUPPORT SHIP			
DISG									
WATOR									
		A PORT	B ASTERN	C HELO	D STED	E PORT	F ASTERN	G HELO	H STED
		I PORT	J ASTERN	K HELO	L STED				
1	1								
2	1								
3									
4									
5	2								
6									
7									
8	3								
9									
10									
11									
12	4								
13									
14	5								
15									
H		ARRANGEMENTS FOR STORES DEMANDS				J			
K		ESTIMATED TOTAL FUEL REQUIRED FROM EACH TANKER							
L		MAIL DISTRIBUTION ARRANGEMENTS							
M		LIFEGUARD				N			
P		BREAKAWAY EXERCISE				Q			
R		HEAVY SHIP STATION				S			
						SCREEN COMMANDER			
						ECCGERS RELIEVE			
						ON STATION			
						HEAVY SHIP			

# SKELETON SCREENING DIAGRAM

## ANNEX 1 I

### RECOMMENDED SKELETON SCREENING DIAGRAM STATEBOARD





# SUBEX STATEBOARD

SERIAL

SUBMARINE

DATE

DIVING SIGNAL RECEIVED

DIVED AT:

SUBMARINE

TIME

CHECK REPORT:

NOTE: Can be incorporated on HCO stateboard or as part of RIC bench information.

SURFACING SIGNAL RECEIVED

INDICATOR BUOYS

SUBMARINE

FWD

APT

COMMUNICATIONS

SUBMARINE

CALLSIGN

BROADCAST

TACTICAL



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ANNEX 1L

SAR Communications Stateboard

1. The purpose of this stateboard is for the senior (G) rating to promulgate detailed unstructions as how the ships radio equipment should be employed in the event of the ship sailing for SAR operation when he is ashore.
2. Considerations should be given to displaying these instructions in the MCO Turn-Over Book instead of on a state-board.
3. Appendix A shows the basic stateboard; Appendix B shows an example of the stateboard completed in detail.

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ANNEX 1 L

Appendix A

RECOMMENDED SAR COMMUNICATIONS STATEBOARDSAR COMMUNICATIONS

If RN ships and aircraft are on a common frequency plan the existing plan should continue to be used. The plan in RNCP 3 is designed for ships and aircraft not using a common plan. It can be ordered by Commander SAR at an early stage.

If the ship is made the Force Commander or is ordered to set watch in accordance with RNCP 3 Chapter 4 action to man following circuits/nets is to be taken

CIRCUIT	FREQ	EMISSION	TX/RX-CHAN NO.	CALLSIGNS	REMOTE	PART OF FORCE	COMMANDER SAR	REMARKS
Ship B/C	Various	F1		-				RNCP 14
Ship-Shore	Various	F1		-				RNCP 14
Scene of Air-Sea Rescue Primary		V		iaw RNCP 3 Chapter 4				For communication with UHF fitted lifeboats and aircraft.
Scene of Air-Sea Rescue Secondary		V		iaw RNCP 3 Chapter 4				Controlled by RCC and guarded by patrol aircraft
Search Force TAC UHF		V		iaw RNCP 3 Chapter 4				For passing of tactical information.
Search Force TAC HF		CW		iaw RNCP 3 Chapter 4				When out of UHF range.
Search Force REP		V		iaw RNCP 3 Chapter 4				Between AIO's of surface ships.
Distress A/C UHF International		V CW/AUTO		iaw RNCP 3 Chapter 4				Communications with Merchantmen may be on 500kHz or VHF Channel 16.

Books required:

RNCP 3

Britt Supp No 1 to ATP 10A

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ANNEX 1L  
APPENDIX B

## EXAMPLE OF COMPLETED SAR COMMUNICATIONS STATEBOARD

CIRCUIT	FREQ	EMIS- SION	TX/RX CHAN No.	CALLSIGNS	REMOTE	PART OF FORCE	COMDR SAR	REMARKS
SHIP BROADCAST	VARIOUS	P1	CJA1/2 CJD1	--	B/Cbay	R	R	RNCPT14
SHIP SHORE	VARIOUS	P1	TDA1 CJA3	---	S/Shay	W	W	RNCPT14
SCENE OF AIR- SEA-RESCUE PRI	282.8	V	691(2) Chan 10	Rncp-3 Chap 4	B'dge Ops	X	XC	For communication with UHF Lifeboats and A/C.
SCENE of A.S.R. SECONDARY	5695.5/ 3095	CW	CJA4 TDA2	Rncp 3 Para 406	MCO	T	T	Controlled by RCC and Guarded by patrol A/C
SEARCH FORCE TACTICAL UHF	279.4	V	691(1) Chan 5	--	B'dge	X	XC	Passing to Tactical Inform- ation
SEARCH FORCE TACTICAL HF	2196	CW	CJA5 TDA3	--	B'dge	XW	XCW	When out of UHF range.
SEARCH FORCE REPORTING	277.8	V	691(3) Chan 2	--	Ops	X	XC	Between A/c's of surface ships
"DISTRESS" A/C UHF	243.0	V	692/1 Chan 8	--	Ops	L	L	Comms with Merchantmen may be on 500Khz or VHF (16)
INTERNATIONAL	500	cw/auto	FM16 TDA3	--	MCO	L	L	

## SAR COMMUNICATIONS

1. If RM ships and aircraft are on a common frequency plan the existing plan should continue to be used
2. The plan in RNCPT 3 is designed for ships and aircraft not using a common plan. It can be ordered by the Commander SAR at an early stage.
3. If this ship is:
  - a. Made force commander or
  - b. Ordered to set watch i.s.v. RNCPT 3 CHAP 4 the following action is to be taken:

NOTES Books required:

RNCPT 3

BRIT SUPP No1 to ATP10A.

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ANNEX 1M

SUBMISS-SUBSUNK-SMASHEX COMMUNICATIONS STATEBOARD

1. The purpose of this stateboard is for the senior (G) rating to promulgate detailed instructions on how the ships radio equipment should be employed in the event of the ship sailing for an SAR operation when he is ashore.
2. Consideration should be giving to displaying these instructions in the MCC turn-over book instead of on a stateboard.
3. Appendix A shows the basic state-board:  
Appendix B shows an example of the stateboard completed in detail.



## RECOMMENDED SUBMISS-SUBSUNK-SMASHEX

## COMMUNICATIONS STATEBOARD

## SUBMISS - SUBSUNK - SMASHEX COMMUNICATIONS

COMCHECK. On receipt of the signal, search is to be carried out on Ship-Shore and Sub Safety frequencies. Then as required by the Senior Officer

SUBMISS - SUBSUNK - SMASHEX. On receipt of the signal, the following complan is to be put into effect.

CIRCUIT	FREQ	EMISSION	EQUIPMENT	CALLSIGNS	REMOTE	WATCH DESIG	REMARKS
Ship B/C	Various	F1		-			RNCP 14 refers. Setting watch signal to conducting authority and Broadcast Control Station.
Ship-Shore	As required	F1		-			RNCP 14.
S/M indicator buoy		A1		Inter-national			Search to be carried out with D/F equipment. Canadian submarines use 4186.5 kHz. Reference RNCP 3 Paragraph 416.
SAR TAC UHF		V		Inter-national			Tactical communications between surface ships and submarines.
SAR REP UHF		V		Inter-national			Between AIO's of surface ships.
SAR Primary		V		Inter-national			Between search force and co-operating A/C.
ASW 1		V		Inter-national			To pass information between A/S plots.
ASW 2		V		Inter-national			As allocated by SOSF.
ASW 3		V		Inter-national			As allocated by SOSF.

## SENIOR OFFICER SEARCH FORCE (SOSF)

1. If detached as SOSF, the conducting authority will probably establish a Subsunk MRL.  
Frequencies as listed in RNCP 3 Paragraph 413.b. *413.b. 413.c. 413.d.*
2. The ship will automatically become control station for the following circuits:-  
SAR TAC UHF, SAR REP UHF, SAR Primary and ASW 1, 2 and 3.
3. For further details consult RNCP 3 Chapter 4, and Britt Supp No 1 to ATP 10A.

## EXAMPLE OF COMPLETED SUBSUNK-SMASHEX COMMUNICATIONS

(TABLE 1001)

SUBMISS - SUBSUNK - SMASHEX COMMUNICATIONS

CHECK: On receipt of signal, search is to be carried out on Ship Shore and Sub Safety Frequencies. Then as required by Senior Officer.

ISS - SUBSUNK - SMASHEX On receipt of signal the following Confam is to be put into Operation:-

FREQ	EMISSION	EQUIPMENT	CALL SIGNS	REMOTE WAY	WATCH DESIGNER	REMARKS
VARIOUS	F3	CRA 2. CDD 1	—	T/C WAY	R	RACP 44 Refers: Setting = White Signal to Conducting Authority and Broadcast Control Station.
AS REQ	F3	TDA 1 CTA 1	—	TAC BAY	XW	RACP 44.
4340/ 4186.5*	CW	FH 4	INTERNATIONAL	FWO	R	Signal to be carried out with D/F Equipment. Comms. C. Subj. use 4186.5.
279.4	V	691/1 CHAN 5	— " —	BRIDGE OR ROOM	X	REF RACP 3 PARAGRAPH 16 TACTICAL COMMUNICATIONS BETWEEN SURFACE SHIPS AND SUBMARINES.
277.8	V	691/3 CHAN 2	— " —	OPS ROOM	X	BETWEEN AIO'S OF SURFACE SHIPS.
282.8	V	691/2 CHAN 10	— " —	OPS ROOM	X	BETWEEN SEARCH FORCE 1 AND CO-OPERATING A/C.
299.4	V	692(3) 8	— " —	OPS ROOM	X	TO PASS INFORMATION BETWEEN A/C PLATS.
230.2	V	692(3) 9	— " —	— " —		AS ALLOCATED BY S.O.S.F.
300.7	V	692(3) 10	— " —	— " —		— " —

OFFICER SEARCH FORCE (S.O.S.F)

- If alerted as S.O.S.F. the Conducting Authority will publicly establish a "Sub Sub MRA". Frequencies as listed in RACP 3 SPARA 41573.
- The ship will automatically become Control Station for following CTS:-  
SAR-TAC UHF, SAR REP UHF, SAR PRIMARY AND ASW, 1, 2, 3.
- For further details consult RACP 3 CHAP 4, AND BRIT SUPP NOT TO ATP 10A.

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ANNEX 1N

EMERGENCY DESTRUCTION ORDERS.

1. Safe Contents.

- (a) The following are the stowage arrangements for classified material in the MCO.

SAFE 1 Cryptographic material.

SAFE 2 Special handling material/SCO & CRS file safe.

SAFE 3 Maintainers classified handbooks.

SAFE 4 Registered ACPs.

SAFE 5 Non-registered ACPs.

- (b) Each safe contains a muster list for the contents, and emergency destruction details for the contents.

- (c) Safes 1 & 2 may contain superceded/reserve material in marked envelopes. Weighted bags are stowed in the cupboard below Safe number 1.

2. Preparation for Emergency Destruction.

- (a) On receipt of the order "PREPARE FOR EMERGENCY DESTRUCTION" the senior rating present in the MCO is to carry out the following:
- (1) Obtain combinations for all safes from the sealed envelope in the key safe.
  - (2) Open all safes.
  - (3) Remove any superceded/reserve material from safe numbers 1 & 2 and place in a weighted bag.
  - (4) Return keying material/documents in use to appropriate safes (except on-line keying material in use.)
  - (5) If time permits muster the contents of each safe.
  - (6) Await further orders, remaining at the safes (safes open).

3. Emergency Destruction.

- (a) When the order to carry out emergency destruction is received the senior rating in the MCO is to detail hands to carry out the following:

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- (1) Commence removing contents of safes 1 & 2 and begin destroying by, a. Shredding b. Smashing beyond recognition.  
Note; Destruction tools are on fwd. bulkhead.
- (2) Commence destroying equipment (debris to be bagged if possible for ditching over the side)
- (3) Do not remove documents/material from safes until you are ready to destroy them.
- (4) If time begins to run out, remove contents of safes, place in sacks and carry aft to burn in portable incinerator.
- (5) If ship is sinking the order may come to lock all safes; therefore do not begin destroying out of sequence.

Note: On completion of destruction/locking these instructions are to be destroyed.

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210. Common faults observed during Work-Up

a, Attention to the following will avoid embarrassment to <sup>H&L</sup> senior ratings during the Work-Up:-

- (1) Briefing. Failure of communication ratings to read exercise orders and failure of senior ratings to keep their staffs briefed has resulted in:-
    - ✓ (a) <sup>EW</sup> Tactical operators not knowing the names and whereabouts of ships in company or the identity of the OTC.
    - ✓ (b) EW operators being late in setting watch and in some cases being entirely ignorant of the EW organisation in force..
    - ✓ (c) <sup>EW</sup> Users of radio nets being unaware of the name or the nature of the net they were manning.
  - (2) Liaison. Lack of liaison has resulted in:-
    - (a) Messages being passed by ship/shore to ships in VS range.
    - ✓ (b) Valuable information being lost to the Command from a partially corrupt message not being reported.
    - (c) Originators being unaware that it had not been possible to clear important messages.
    - (d) The Command being unaware that there has been a power failure in the MCO.
    - (e) The MCO not being told when communication had been lost on an Operations Room net.
    - (f) Intercepted messages containing information of great interest and value to the Command not being reported because the ship concerned was not included in the address.
    - (g) Messages not being handled in accordance with the precedence.
    - (h) No up-to-date position available in the MCO.
    - (i) No weather reports passed ashore when it has been necessary to break radio silence.
    - ✓ (j) Operations Room personnel not knowing the effective NUCC or Authentication Table.
- 485

RESTRICTED

(3) Radio

- ✓ (a) Failure to set watch on circuits by thr correct time.
- (b) Reluctance by ROs to suspect own equipment when communication is lost.
- ✓ (c) Failure to check equipment from user's position.
- (d) Failure to clear urgent traffic on an alternative net when communication has been list on the net on which it would normally be passed.
- (e) Carelessly tuned transmitters (eg. resonators not tuned to the frequency).
- (f) Poor RATT Broadcast reception caused by incorrect setting up of equipment.
- (g) HF receiver outputs being fed into V/UHF voice circuits because the B40 in a parallel W/T office bay has not been isolated from the remote control system.
- (h) Gryo rings on DF sets not aligned to ship's head or checked regularly.
- (i) Using emergency power supplies when power is still available from the alternative supply.
- (j) Lack of attention to wire aerials and deck insulators. (Frayed whipping, corroded connectors, DI's not greased).
- (k) Failure to listen out before transmitting on a morse net.
- (l) Operators transmitting at a speed beyond their own capability and that of the receiving operator.
- (m) Messages not authenticated.

(4) Security

- (a) HF silence indiscriminately broken because:-
    - (1) Operators did not know or did not understand the policy in force.
    - ✓ (2) Electronic Emission Policy boards not placed.
  - (b) A general lack of knowledge of the meaning of communication Security Policies 1, 2 and 3.
  - (c) Circuit numbers and tactical callsigns compromised by care-less linkages.
- VGS



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- (d) NUCO and Authentication tables not readily available.
- (e) Failure to use NUCO.
- (f) Failure to carry out the daily muster of books on loan to the Communications Division.
- (g) Muster boards not signed by an Officer. Corrections to muster boards not signed by the same officer.
- (h) Page by page musters of communications and cryptographic publications not carried out in accordance with BR 4005.

(5) Electronic Warfare

- (a) Inefficient use of HF receiver controls.
- (b) Failure by the EWD to pass evaluated EW information to the remainder of the force, (eg. establishing a racket area) on appropriate net.
- (c) Failure to carry out operators check on DF equipment.
- (d) Ineffective control of EW Co-ordination net resulting in procedure errors and poor voice technique.
- (e) Failure by PWO to keep EW Office informed of the tactical situation.
- (f) Failure to include a position when an intercept is gained during CASEXES.
- (g) Failure to pass out threat signals on appropriate circuits (ie. Sub-Surface/Surface threat on EW Co-Ordination and Reporting UHF).

(6) Visual Signalling

- (a) Insufficient delegation. CCYs/CYs and LROs (T) must resist the temptation to man signalling lamps personally)
- (b) Poor VS lookout and alertness.
- (c) Slackness or complete failure in acknowledge salutes from passing merchant ships.
- (d) Using an inadequate light for recognition challenge and reply and ignorance of the correct recognition procedure by VS ratings.
- (e) Badly trained signalling lanterns.
- (f) Insufficient time allowed between ordering and excuting screens.

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- (g) Unnecessary use of the Immediate Executive method.
- (h) Poor reporting to the Command
- (i) Signal groups not interpreted correctly.
- (j) Address of tactical signals not reported.
- (k) Failure to ensure that the officer concerned has received the signal and acknowledged its receipt.
- (l) No time group appended to groups transmitted by voice or radio.
- (m) Equipment.
  - i Frayed halyard splices.
  - ii Torn and dirty flags.
  - iii Grease nipples on SPs clogged with paint.
  - iv Dirty and cracked SP reflectors.
  - v Power leads to 10" SPs not led through clamp on trunnion arm.
  - vi Inside of SPs rusty and flaking.
  - vii Wrong materials used to clean reflectors.
  - viii No Aldis and battery available during power failures.
  - ix Bearing alignment rings of 20" SPs incorrectly aligned.

(7) Voice Operating.

- (a) Incorrect procedure.
- (b) Poor voice techniques.

✓ (8) NBCD. A poor knowledge of the NBCD organisation has resulted in:-

- ✓ a. Failure to provide reliefs for operators.
- ✓ b. Equipment left uncovered on the Flag Deck and open bridges during fallout and prewetting.
- ✓ c. Communication ratings being the major offenders in failure to wear anti-flash gear or even to have it to hand.

✓ (9) Stowage for Sea. Valuable equipment damaged because of slack and failure to secure for sea.

✓ 155

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ANNEX 2A

EXERCISE PLANNING GUIDANCE

1. EXERCISE PREPARATION

- a. Communications Exercises Planned on FF 10 should be brought to the attention of the operations Officer in sufficient time for him to incorporate them (where applicable) in the ship's WPP.
- b. Those exercises involving other ships require to be ordered i.a.w. the ordering tables from the appropriate exercise publication. The aim should always be to give the maximum possible notice to other units to enable them to plan accordingly.
- c. The training planning sheet (Annexes 1D and 1E) when transferred to the divisional daily allocation sheets see(SMS Handbook) enables men to see what exercises they are involved in each day, together with the times they are to take place.
- d. It is advisable that the rating in charge of these exercises produce a brief or make sure that all participants are aware of all relevant facts necessary to ensure the smooth running of them  
e.g. (1) Who is conducting/controlling the exercise.  
(2) What positions are required to be manned.  
(3) What callsigns and procedures are to be used.  
(4) What tools are required:  
eg Headsets/Microphones - Logs - Publications  
- Crypto material - Question sheets etc  
(5) What records are required.

2. RECORDING THE RESULTS

- a. Objective. To analyse results to decide:
  - (1) Whether a ship requires more programme time and exercise facilities.
  - (2) Whether the total scores or results obtained are of the required standard.
  - (3) Whether operators are maintaining their OPS.
- b. Methods:
  - (1) 18 week period returns of Fleet Form 10 (for all sections of the ship) together with comments of section head and C.O.
  - (2) Signalled reports of communications exercises i.a.w. the formats from relevant exercise publications.

YES

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- (3) Weekly record of all communications division exercises/  
training on forms S1308C and S1309D.

YES  
✓  
13

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CHAPTER TWO

SHAKE-DOWN AND WORK-UP

201. General

a. Preparations for shake-down and work-up should start as soon as possible and much of the activity outlined in Chapter 1 is towards this end.

b. The Sea Training Work-up Guide (STWG) must be studied in detail. There are many sections which concern communications and EW other than Section 5.

202. Management points during the Work-Up

a. Much of the success of the communication division in the Work-Up will depend on:

(1) Delegation.

(a) Assess the ability of those junior to you and delegate whenever possible.

(2) Preparation.

(a) Senior (G) and (W) ratings and senior RP ratings plan for the following days events.

(b) Senior (G) ratings draw up comprehensive COMPLAN for the following days events.

(c) Check equipment from ser positions with microphone/handsets which will be used

(d) If possible, test circuits with other ships before sailing

(e) Ensure equipment and operators are ready at the right place, on the right frequency at the right time.

(3) Security.

(a) Insist on compliance with cryptographic, physical and transmission security at all times.

(b) Ensure the EMCON policy can be promulgated expeditiously.

(4) Briefing.

(a) Brief operators on the outline of an exercise and on the details of their particular duties in clear and objective language.

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- (b) Keep operators up-to-date with the tactical situation
- (c) Brief non-communication users is essential circuit details.

(5) Liaison

- (a) Effect good two way working liaisons-eg;

    Ew Office-Operations Room,

    Bridge-Operations Room.

    Bridge-Flag Deck.

    MCO-Bridge

    MCO-Operations Room

    Communication Division-WEO

- (b) Use the Divisional Co-Ordinator.

- b. The above points are covered in greater detail in the STWG.

203. Communication training and exercises

a. Chapter 1 deals with the requirements for basic training in ships and the management organisation needed to implement it. The information in this chapter deals with the broader aspects of training and participation in EW, communications and associated exercises.

b. In addition to the books listed in paragraph 117 the following references should be used by the Senior Communications Ratings, and particularly, the Training Co-Ordinator (see paragraph 114B):-

<u>Publication/Form</u>	<u>Contains details of</u>
(1) AXP 1	Communications required for standard ASW exercises.
(2) AXP 2	Communications required for all exercises other than those in AXP 1 and 3 and RNCP 12
(3) AXP 3	Standard NATO and RN communications exercises
(4) RNCP 12	EW exercises.
(5) FXTI	Bogey requirements and Fleet Form 10.



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<u>Publication/Form</u>	<u>Contains details of</u>
(6) JSP 2	Joint Communications Exercises.
(7) STWG	Work-Up requirements

c. The prime objective during the Work-Up is for all ratings to achieve their Operational Performance Standards and, if possible, to commence attaining the OPS of the next higher rate. To this end:-

- (1) Weekly practical exercises must be read in accordance with RNCP 15.
- (2) Each sub-division must participate to the maximum in the Weekly Communication Exercise Programme (WCXP)
- (3) Internal communication and EW exercises should be arranged.
- (4) Exercise the communication organisation for:
  - (a) manning the seaboard
  - (b) landing and boarding parties
  - (c) Operation Awkward
  - (d) Operation Searcher.
  - (e) Enemy Contacting Reporting.
- (5) Participate in NGS and Joint Communication Exercises.

d. Full details of communications exercise requirements at Portland are contained in Annex Alfa to the Portland Weekly Practise Programme. Details of conduct and reports required are in STWG Section 5.

e. Planning guidance is given in Annex 2A.

204. Planning the training and exercises programme

a. Short term planning.

- (1) Objectives. To produce a weekly divisional training and exercise programme which includes:
  - (a) Communication exercises detailed from the Fleet Form 10 (FF 10) for that week
  - (b) Weekly practical exercises (RNCP 15).

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(c) Instructions - i OJT

- ii Formal to meet OPS
- iii Formal for Advancement.

(2) Method. The recommended planning sheet is shown at Annex 1D and 1E

b. Long Term Planning

- (1) Objectives. To achieve the bogey figures for the FXTI 13 week period in accordance with the appropriate FXTI on Exercise Directives.
- (2) Method. FXTI FF 10 eighteen week planning grid.

c. Detailed guidance for the above is given at Annexes 2A and 2B.

205. Message Processing Organisation

a. The ships Message Processing Organisation should be tested to capacity before the Work-Up starts.

b. This can be effected in two ways-ie;

- (1) An internal exercise involving a large number of "Drill" messages passing through every stage of the organisation.
- (2) Utilising the Portland "Broadcast Check" exercise details of which are contained in the STWG.

c. The reference for message processing is ACP 121 Annex W.

209. Shakedown and Work-Up Check - Off List

a. To ensure an effective communication organisation the items in paragraph 129 must have been dealt with prior to sailing for Shake-Down.

b. The following are points to be covered during the Shake-Down and if possible prior to Work-Up. If they can be done before this so much the better:-

(1) Equipment and Trials.

- (a) Test main HF transmitters with a Commonwealth Ship/Shore station outside UK.

Programme		AMF		Jnx		V I S I T		WEAPON TRNG		LEAVE		PASSAGE TO F.E.		PATROL					
DATE	SERIAL No.	1 <sup>st</sup> MAR	8 <sup>th</sup> MAR	15 <sup>th</sup> MAR	22 <sup>nd</sup> MAR	29 <sup>th</sup> MAR	5 <sup>th</sup> APR	12 <sup>th</sup> APR	19 <sup>th</sup> APR	26 <sup>th</sup> APR	3 <sup>rd</sup> MAY	10 <sup>th</sup> MAY	17 <sup>th</sup> MAY	24 <sup>th</sup> MAY	31 <sup>st</sup> MAY	7 <sup>th</sup> JUN	14 <sup>th</sup> JUN	21 <sup>st</sup> JUN	28 <sup>th</sup> JUN

## Notes on completing the Fleet Form 10

The Communication Division

References: a. Fleet Exercise and Training Instructions (FXTI)  
Art 103, Annex A, Section 7.

b. Shipa Longcast.

c. RNCP 12, RNCP 15, CB 05011,, AXP3B & JSP2.

1. The Fleet Form 10 (Training Schedule Grid) covers an 18 week training period.
2. The following is completed at the beginning of the 18 week training period:
  - a. Line 1 (Programme) indicated in general terms only from reference b.
  - b. Line 2 (Date) contains the date of the first day of each training week.
  - c. Column 1 (Serial No.) contains only those required to be undertaken by your type of ship (see columns 1 and 6 of reference a.)
  - d. Column 20 (Bogey) contains bogey figures from column 6 of reference a.
  - e. Column 2 through 19 plus number of lines required (Main Grid) contains exercises 'planned' from columns 2, 3, and 4 of reference a., reference b. and c.
3. Initial Planning should be marked out in pencil. Actual exercises carried out then being filled in with pen. The following symbols should be used for completing the Fleet Form 10:

✓ Planned      X Achieved      ⊙ Abandoned      ↗ Postponed

Note. Where more than one exercise is planned or achieved in any one week, the actual number is inserted in the appropriate box, thus 2

4. Report form: Column 21 (Achieved) is to be ticked ✓  
for bogeys achieved. Exercises abandoned and any other  
remarks relevant to the training period are to be appended  
to the reverse side of the fleet form 10.

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- (b) Test low power HF transmitters with a continental stations.
- (c) Test V/UHF sets with a ship or shore station at ranges greater than 16 miles.
- (d) Test all portables including Stornophones.
- (e) Test FST and A2 with another station.
- (f) MCO RIC Meteorological Area Chart.
- (g) MCO RIC COMPLAN extracts.
- (h) PCS board at DF bay.
- (i) Senior EW rating check RNCP 10 Chapter 3.
- (j) Provision of alternative equipment for the more important nets.
- (k) Provision of ready information as shown in Chapter 1 Annexes 1H to 1M.

(2). Training and Exercises

- (a) Authentication and Numeral Codes.
- (b) Study FXTI and FOTI
- (c) Fleet Form 10.
- (d) Emergency Procedures
- (e) Training for Advancement.
- (f) Enemy Contact Reporting.
- (g) Naval Gunfire Support.
- (h) JOCCOMEX
- (i) NAVCOMEX
- (j) Operation AWKWARD.
- (k) Boarding and Landing parties.
- (l) Board and Tow
- (m) Annex Alfa to the WPP.
- (n) Senior EW rating check RNCP 10 Chapter 3.